18.B.

BRITISH MUSEUM
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NATURAL HISTORY

Bournemouth Natural Science Society

Proceedings

(1973 - 74)

VOLUME LX

PART I

Bournemouth Natural Science Society

Introductory Note

The objects of the Society are declared by the second of its rules to be "the promotion of the study of Science in all its branches, and of Public Education by means of Lectures, Field Meetings, the Reading and Discussion of Papers, and in any way that the Council of the Society shall deem advisable".

The branches of Science at present represented are as follows:—**Archæology and History, Astronomy, Botany, Entomology, Geography, Geology, Ornithology, Photography, Physics and Chemistry, and Zoology.**

During the **Winter Session,** from October to April, frequent meetings are held comprising Lectures and Demonstrations on subjects of scientific interest, illustrated by lantern slides, films, the epidiascope, diagrams, specimens and experiments.

Throughout the **Summer Session,** Field Meetings are held in various suitable places in the neighbourhood of the town, or sometimes Coach Tours are arranged to districts of scientific interest at a distance.

The management of the Society is vested in a Council, which is elected at the Annual General Meeting.

The Society possesses a Library available for the use of Members. Books may, under certain conditions, be borrowed by Members, and there is a Reading Room in which works of reference may be consulted. The Museum contains many valuable scientific collections and specimens. There is a well-equipped Dark Room for the use of Members interested in Photography.

Members are elected by the Council and pay an annual subscription of £3 for full membership. Life Subscription £25. Family Subscription (for members of a family living in the same house), is as follows: First Adult Member £3, additional Adult Members £2. Associate Membership Subscription is £1 and is restricted to young people up to 18 years of age or, if a bona-fide full time student, up to 21 years of age.

Country Membership applies only to those Ordinary Members who reside permanently **Outside** the boundaries of Bournemouth, Christchurch and Poole.

Subscriptions of Country Members are, First Adult Member £2, additional Adult Members, same family £1.50.

Special subscription for visitors to Bournemouth, 25p per month.

Members may enter into a Deed of Covenant to pay subscriptions by Banker's Order over the period of seven years. At present, the Society benefits by approximately 43p on each £1 subscribed in this way. Full particulars from the Hon. Treasurer on request.

A three-monthly programme, giving full details of all meetings is supplied to every Member and a Volume of Proceedings is published each year of which each Member receives a copy (additional members of a family living in the same house on application to the Secretary).

Further particulars and membership application forms may be obtained from the Honorary Deputy Secretary, Bournemouth Natural Science Society, 39 Christchurch Road, Bournemouth.

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PROCEEDINGS

of the

Bournemouth Natural Science Society

VOLUME LX

PART I

1973 - 74

Edited by
GRAHAM TEASDILL
F.M.A., F.R.S.A., F.R.N.S., F.Z.S.

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A set of back numbers may be consulted in the Society's Reference Library or individual Volumes borrowed from the Lending Library on application to the Librarian.

Contents

	Page
Officers and Council, 1974–75	3
Committees, 1974–75	4
List of Members, 31st October, 1974	5
Biographical Obituary, Mr. H. V. Harris	25
Presidential Address :—	
Conservation in Practice by D. Small, M.Sc.	15
Sectional Reports for the Year 1973–74 :—	
Archæology and History	26
Botany	27
Geography and Geology	28
Physics and Chemistry	28
Zoology — Entomology	30
Mammalia	31
Ornithology	35
Members Days	37
Lantern Slide Collection	37
Museum	38
Tea Committee	39
Visiting Panel	39
Summary of Accounts for the year ending 30th September, 1974	40
Lectures, Field Meetings and Visits, 1973–74	44

Bournemouth Natural Science Society

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N.B.—University degrees and other qualifications are inserted only at the first mention of names.

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Photography : MISS U. M. OGLE
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Ornithology : MRS. L. M. MADDOX

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Hon. Editor : G. TEASDILL

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H. P. WHEELER

COMMITTEES, 1974–75

Finance and General Purposes :

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Museum :

Chairman : W. A. Bray
Chairmen of Sections (*ex officio*)
G. Teasdill

Library :

Chairman : W. J. Middleton
Miss C. F. Noll, F. Oldham, Mrs. B. E. Hooton-Smith, Miss L. M. Rowe, Miss C. Hayball (*Assistant Librarian*), Miss E. Crichton Todd (*Librarian*)

House :

Chairman : K. L. Anderson
Mrs. W. Chome, W. H. Lee, Mrs. B.Taylor

Garden :

Chairman : Mrs. W. Chome
Miss R. W. Brown, Miss D. Clamp, Miss H. I. Payne, Miss E. M. Whitaker

Tea :

Chairman : Mrs. M. K. Parkinson
Miss R. W. Brown, Miss I. K. Burroughs, Mrs. F. M. Coote, Mrs. A. Cousins, Mrs. M. Laidlaw, Mrs. M. Mitton, Mrs. K. E. Robinson, Miss W. A. Saunders, Mrs. B. Taylor (*Deputy Chairman*), Mrs. H. I. Taylor, Mrs. L. Wheeler, Miss E. M. Whitaker

Entertainment :

Chairman : Miss M. Allen
Miss D. Clamp, Miss D. M. Collier, Mrs. A. Day, Mrs. C. D. M. Goldie, A. L. Ledger, J. Robinson

Visiting :

Chairman : Mrs. E. Buckland
Sqd. Ldr. J. L. C. Banks, Mrs. W. Chome, Mrs. V. Follett, Miss F. A. Stiff, Mrs. G. Walker, Miss E. M. Whitaker

Bournemouth Natural Science Society
List of Members

Revised to 31st October, 1974

* Honorary Member
v Vice-President
† Past President
w Gilbert White Fellowship
l Life Member
a Associate Member

The year of election is given before the name of each member
Unless otherwise stated all addresses are in Bournemouth

1974	Adlard, Mrs. L. B.	18 Seaward Avenue, BH6 3SH
1958	Agar, R., C.ENG., M.I.C.E., M.I.MUN.E., A.M.I.STRUCT.E., A.M.T.P.I.	84 Howard Road, BH8 9ED
1961	Aiers, Miss E. M.	Flat 1, 19 McKinley Road, BH4 8AG
1958	Aiers, Mrs. F.	6 Arnewood Court, West Cliff Road, BH2 5ET
1974	Aldham, Mrs. S.	Little Ven, Milborne Port, Sherbourne, Dorset
1963	Allen, Miss M.	174 Holdenhurst Road, BH8 8AS
1971	Allin, Mrs. J. M.	14 Oakwood Road, Highcliffe
1968	Allington, A. H.	29 Colemere Gardens, Highcliffe
1968	Allington, Mrs. I.	,, ,,
1960	Alsford, C.	20 Church Road, Ferndown, BH22 9EU
1960	Alsford, Mrs. J. R.	,, ,,
1955	Ambler, Mrs. A.	13 Elgin Road, BH4 9NL
1968	Ames, W. J. C.	3 Rothesay Road, BH4 9NH
1968	Ames, Mrs. D. A.	,, ,,
1972	Anderson, G., B.SC.	6 Grove Mansions, Grove Road, BH1 3DA
1971	Anderson, K. L., C.ENG., F.I.MECH.E.	21 Marchwood, 8 Manor Road, BH1 3EY
1970	Andrews, Mrs. A.	41 James Road, Branksome, BH12 1EA
1965	Andrews, Miss K. E.	49 Christchurch Road, BH1 3PA
1970	Angus-Hay, Mrs. L. E.	9 Windermere Road, BH3 7LF
1967	lArnold, Mrs. M.	1198 Christchurch Road, BH7 6DY
1972	Atley, Mrs. C. E.	6 Solent Road, BH6 4BP
1974	Ayton, D. J.	201 Kinson Road, BH10 5HB
1974	Baker, Mrs. E. V.	18 Seaward Avenue, BH6 3SH
1962	Balfour-Browne, Miss E. F.	Acorn Cottage, Station Road, Verwood
1966	Band, Mrs. M. M. A.	5 Boscombe Cliff Road, BH5 1JL
1970	aBand, Miss E.	,, ,,
1971	Band, Mrs. S. G.	2 Lombard Avenue, BH6 3LY
1967	†vBanks, Sqd. Ldr. J. L. C.	Kingston Dene Walk, Ferndown, BH22 8PQ
1974	Barbirolli, Mrs. M.	2 Chislehurst, Grosvenor Road, BH4 8BH
1967	Barnes, F. W.	12 Springfield Avenue, Christchurch BH23 2PE
1971	lBartram, T., F.N.I.M.R., F.R.S.H., F.H.A.	6 Browning Avenue, BH5 1NN
1972	Beckwith, W. E.	8 Cranleigh Gardens, BH6 5LE
1971	Beckwith, Mrs. I. A.	,, ,,
1974	Bell, Miss D. H.	19 Gainsborough Road, BH7 7BD
1944*	†vBell, T. M., B.A., M.B., B.CH.	5a Stourwood Avenue, BH6 3PN
1941	Bell, Mrs. R. M.	,, ,,

1963	†vBennetts, Miss K. M., F.Z.S.	29 Bellevue Gardens, Belle Vue Road, BH6 3BC
1974	Bennett, W. H. D.	3b Elgin Road, BH4 9NL
1974	Bennett, Mrs. M. E.	,, ,,
1947	Berrill, Miss M. E.	41a Cavendish Road, BH1 1RA
1967	Bettell, Miss I. M.	4 Curzon Court, 11 Portarlington Road, BH4 8BU
1972	Bevans, Mrs. E.	7 Heathwood Road, BH9 2JX
1966	Bidder, E. R.	Durley Dean Hotel, West Cliff Road, BH2 5HE
1972	Birkinshaw, D.	30 Lowther Road, BH8 8NG
1951	LBlandford, Mrs. R. I.	B18 Elizabeth Court, Grove Road, BH1 3DC
1973	Blanksby, Mrs. A. M.	12 Arnewood Court, West Cliff Road, BH2 5ET
1971	Bliss, J. W.	9 Oak Close, West Parley, BH22 8UA
1971	Bliss, Miss I.	,, ,,
1964	Blower, Miss M.	6 Newton Road, Canford Cliffs, BH13 7EX
1960	Boite, E. E. G.	17 Browning Avenue, BH5 1NR
1957	Booth, Mrs. L.	41 Cedar Avenue, Christchurch, BH23 2PS
1972	Bowers, J. F. R.	2 Wootton Court, Wootton Mount, BH1 1PJ
1967	Bowers, Mrs. M. P.	,, ,,
1969	Bray, W. A.	234 Ringwood Road, Leigh Common, Wimborne, BH21 2DE
1969	Bray, Mrs. E. M. F.	,, ,,
1968	Brazier, Miss M. A.	4 Cedar Avenue, BH10 7EF
1971	Broadway, Mrs. V. M.	A23 San Remo Towers, Sea Road, BH5 1JR
1970	Brooks, J. L.	7 Milton Road, Wimborne, BH21 1NY
1970	LBrooks, Miss M. M., PH.C., M.P.S., F.R.S.H., F.R.E.S.	,, ,,
1967	Brown, H. G.	3 Blake Hill Avenue, Poole, BH14 8QA
1966	Brown, Miss R. W., B.A.	11 St. Winifreds Court, 3 St. Winifreds Road, BH2 6NY
1974	Brown, R., B.SC.	Hurn Court, Christchurch, BH23 6AB
1967	Brown, S. C. S., F.D.S., R.C.S., L.D.S.	158 Harewood Avenue, BH7 7BG
1962	Brown, Miss V. C.	9 Laverstock, Boscombe Cliff Road, BH5 1JN
1973	Buckland, R. C., A.I.B.C.M.	110 Harewood Avenue, BH7 6NS
1969	Buckland, Mrs. E.	,, ,,
1971	Burges, L. H.	7 Wolverley Court, 31 Marlborough Road, BH4 8DF
1971	Burges, Mrs. E.	,, ,,
1964	Burroughs, Miss I. K.	2 Dearmer House, 11 St. Albans Avenue, BH8 9EE
1970	Burt, Mrs. O. M.	17 Vicarage Road, BH9 2SA
1930	Bury, Miss G. J.	Little Mayfield, 10 Rossley Close, Christchurch
1973	Butcher, Mrs. C. E.	10 Victoria Gardens, Fordingbridge
1967	Cady, Mrs. L.	108 Alexandra Road, Poole, BH14 9EP
1964	Cartwright, Miss D. E., M.B.E.	31 Wistaria House, Redhill Drive, BH10 6AE
1974	Capper, Dr. K. R., PH.D., F.P.S.	10 Kenilworth Court, Western Road, Poole
1943*	†vChambers, E., F.I.S.	49 St. Catherines Road, BH6 4AQ
1950	Chambers, Mrs. E.	,, ,,
1974	Channon, W. V. K.	36 Studland Road, BH4 8JA
1959	Charter, Mrs. E. E.	Flat 3, 1 Cavendish Place, BH1 1RQ
1951	Chomé, E. E. P.	6 Alyth Road, BH3 7DF
1942	*Chomé, Mrs. W.	,, ,,

1968	Clamp, Miss D.	22 Brierley Road, BH10 6EH
1974	Clapton, Miss D. E.	11 Gardens Court, 45 Surrey Road, BH4 9HR
1945	Clarke, Mrs. M.	4 Gardens Court, 57 Parkstone Road, Poole BH15 2NX
1973	Clegg-Hill, Mrs. J. P.	216 Muscliffe Lane, BH9 3NW
1967	Clifton, Mrs. F. A., D.PH.	2 Tutton Lodge, Christchurch, BH23 3LR
1963	Clode, J. C.	11 Oakley Road, Wimborne, BH21 1QJ
1973	Clode, Mrs. V. M.	,, ,,
1972	Coates, Sir F. G. L.	Launchfield, Briantspuddle
1958	*Cocke, M. H.	St. Ives House, Horton Road, St. Ives, Ringwood
1974	Cole, A. C.	48 Charminster Avenue, BH9 1SB
1972	Collier, Miss D.	134b Richmond Park Road, BH8 8TW
1974	Collins, Mrs. D.	11 Elysium Court, Aldridge Road, Ferndown, BH22 8LT
1971	Collinson, Miss M.	14 New Road, BH10 7DT
1970	Cooke, F. W.	14 Meadow Close, Ferndown, BH22 8RN
1941	LCooper, Mrs. E. M.	B18 Elizabeth Court, Grove Road, BH1 3DC
1972	Coote, Mrs. F. M.	D4 Exbourne Manor, 37 Christchurch Road BH1 3NX
1952	Corser, Miss G. M.	3 Aspen House, Elm Grove Place, Salisbury
1971	Cotton, Dr. W. J., B.A., B.M., B.CH.	13 Fairways, Ferndown, BH22 8BA
1971	Cotton, Mrs. K.	,, ,,
1971	Coulton, Miss L. M.	39 Chigwell Road, BH8 9HW
1972	Cousins, Mrs. A.	51a Newstead Road, BH6 3HL
1970	Cowell, H. F.	62 Hurn Way, Christchurch, BH23 2DP
1970	Cowell, Mrs. E. J.	,, ,,
1948	*Cox, Mrs. E. D.	248 Castle Lane, BH8 9TT
1956	LCox, Miss M. G. E.	4 The Maitlands, 8 Portarlington Road, BH4 8BT
1973	Crane, Mrs. R. C.	120 Seafield Road, BH6 3JL
1971	Crawford, Miss E. M.	Dormy House, 11 Central Drive
1973	Crawshaw, T. A., M.INST.M.E.	94 Meon Road, BH7 6PR
1966	Cromey-Hawke, Mrs. D.	38 Elgin Road, BH3 7DH
1972	Crossland, D.	188 Castle Lane, BH9 3JZ
1971	Crouchley, A. E., C.B.E., M.A., B.COMM.	21a Woodland Avenue, BH5 2DJ
1972	Davis, Mrs. D. D.	5 Marks Road, BH9 2XQ
1972	Davis, R. T.	,, ,,
1964	Day, Mrs. A.	15 Bosley Way, Christchurch, BH23 2HF
1967	Deacon, Miss M. G. K.	42 Belmont Road, Poole, BH14 0DB
1973	Dear, Mrs. M. H., B.A.	12 Dene Walk, Ferndown, BH22 8PQ
1930	*de Castro, H.	72 Springdale Avenue, Broadstone
1935	Derry, Mrs. H. E.	33 Bellevue Crescent, BH6 3BW
1962	Dickson, A. A.	23 Sandy Lane, Upton, Poole
1972	Dickson, Mrs. D. W.	8 Nairn Court, Nairn Road, BH3 7BE
1970	Dodds, J. J., B.A.	B4 Halebrose Mansions, Belle Vue Road, BH6 3DU
1972	Dolamore, Mrs. M.	15 Dene Walk, Ferndown
1973	Donnelly, J. F.	3 Bruce Hayes Close, Highcliffe
1973	Donnelly, Mrs. W.	,, ,,
1974	Donnelly, Mrs. V. G.	10a Pine Grange, Bath Road, BH1 2PF
1970	Dowland, C. J.	49a St. Catherines Road, BH6 4AQ
1968	Dowland, Mrs. M. M.	,, ,,
1970	Draper, G. S.	44 Brackendale Road, BH8 9JA
1970	Draper, Mrs. O. G.	,, ,,
1961	Draper, Mrs. G.	45 St. Osmonds Road, Poole

1953	Dudley, D. J.	17 Widdicombe Avenue, Poole
1955	Dudley, Mrs. I.	,, ,,
1972	Dunfee, Miss E. G.	5 Barton Drive, Barton-on-Sea
1974	Durrant, J. A.	4 Twynham Road, BH6 4AF
1969	Dyke, Mrs. R.	9 Nairn Court, Nairn Road, BH3 7BE
1967	Earl, Mrs. J. C.	10 Merrifield Drive, Broadstone
1974	Easterbrook, L.	4 The Pines, 38 The Avenue, Poole
1974	Easterbrook, Mrs. F. P.	,, ,,
1953	Eaton, Mrs. V. W.	16 Barclay Mansions, St. Valerie Road, BH2 6PF
1965	*Edwards, Brig. A. B. D., C.B.E., M.C.	234 Burlington Hotel, BH5 1AD
1969	Edwards, Miss G. M.	119 Craigmoor Avenue, BH8 9LT
1967	Eisner-Heublum, Dr. A., PH.D.	5 Pandora Road, London, N.W.6.
1963	Elliott, Mrs. D.	85 South Road, BH1 4PB
1971	Evans, J. T.	5 Leven Avenue, BH4 9LH
1973	Ewing, Mrs. M.	47 Alumhurst Road, BH4 8EW
1955	*†vExton, Miss F. M., B.A.	Far Hills, Bestwall Crescent, Wareham
1953	LFarwell, Mrs. S. M. A.	Latch Farm, Fairmile, Christchurch
1965	Fildes, Mrs. E. M.	32 Clifton Road, Poole
1966	Fitch, Miss E. N.	Durley Dene Hotel, West Cliff Road, BH2 5HE
1965	Foley, Miss E.	27 The Chantrey, Madeira Road
1973	Follett, J. C.	10a Stevenson Crescent, Poole
1954	Follett, Mrs. V.	,, ,,
1974	Forbes, Dr. R., M.B., CH.B.	Seascape, Salterns Way, Poole
1974	Forbes, Mrs. E. M.	,, ,,
1973	Foster, Mrs. A. R.	32 Tollard Court, West Hill Road
1962	Fox, Mrs. V.	1 Clifton Court, Heathcote Road, BH5 1EY
1973	Francis, E. C.	18 Solent Road, BH6 4BP
1963	Freeman, Miss R. C.	10 St. Augustines Road, BH2 6NX
1968	French, A. H.	36 Dulsie Road, BH3 7EA
1970	French, Mrs. H. M.	,, ,,
1974	George, W. L.	8 Glendale Close, Wimborne
1974	George, Mrs. J.	,, ,,
1972	Gillett, Miss M. M. A.	16 Talbot Avenue, BH3 7HX
1963	Goldie, Mrs. C. D. M.	20 Balcombe Road, Poole
1949	Goodhart, Mrs. M. S.	West Thorpe, Lymington
1963	Graham, Miss C. A.	16 Church Road, BH6 4AT
1965	Grange-Bennett, Mrs. M.	6 Brudenell Avenue, Poole
1974	Grant, I. M.	15 Foxholes Road, BH6 3AT
1953	Gray, Miss E.	44 Edmondsham House, Terrace Road
1967	Green, Mrs. E. I., B.A.	27 Southlea Avenue, BH6 3AD
1970	Greville-Heygate, Mrs. D.	Long Close House, Downton, Salisbury
1967	Griffiths, H. D., M.A.	C23 San Remo Towers, Sea Road, BH5 1JT
1973	Griffiths, Mrs. R. A.	,, ,,
1973	Gunter, Mrs. R. B.	13 Annerley Road, BH1 3PG
1951	Haines, Miss G. M.	Appleslade, Linwood, Ringwood
1951	Haines, Miss R. M.	,, ,,
1971	Hall, J. O.	36 Keith Road, BH3 7DU
1971	Hall, Mrs. D. M.	,, ,,

1972	Hanna, H. J. A.	6 Cliffe Road, Barton-on-Sea
1971	Hanna, Mrs. K. A., M.A.	,, ,,
1972	Harding, R.	3 Porchester Place, BH8 8JS
1972	Harding, Mrs. L.	,, ,,
1974	Harding, R. E.	39 Branksea Avenue, Poole
1974	Harding, Mrs. M. I.	,, ,,
1961	Harvey, Mrs. F. E., M.B., CH.B.	C21 San Remo Towers, Sea Road, BH5 1JT
1964	Hatton, R. H. S., M.A.	Pine Cottage, Lower Rowe, Holt
1951	Hawker, Mrs. E.	64 Alumhurst Road, BH4 8EU
1973	Hayball, Miss G.	67 Walcott Avenue, Christchurch
1951	Hayman, Miss M. S.	39 Queens Park South Drive, BH8 9BJ
1969	Hayter, Miss E.	38 Edgehill Road, BH9 2PQ
1971	Hayward, Mrs. E.	54 Lansdowne Road, BH1 1RS
1970	Heales, H. C., J.P., F.B.S.	23 Albemarle Road, BH3 7LZ
1970	Heales, Mrs. V. A.	,, ,,
1972	LHealey, Mrs. R.	5 Leven Avenue, BH4 9CH
1971	Heaton, W. J., B.ENG., C.ENG., F.I.E.E.	8 Mayfair, 74 West Cliff Road, BH4 8BG
1971	Heaton, Mrs. M. I.	,, ,,
1954	Hermon, J. A.	43 Stourcliffe Avenue, BH6 3PU
1968	Hills, Mrs. W.	21 White Lodge, Boscombe Spa Road
1973	Hilton, J.	47 Belle Vue Gardens, Belle Vue Road, BH6 3DF
1973	Hilton, Miss M. L., B.SC., PH.D.	,, ,,
1962	*Hipperson, Miss M.	69 Headswell Avenue, BH10 6JZ
1974	Hoar, Miss K.	159 Fairmile Road, Christchurch
1974	Hobbs, Miss A. A.	25 Ensbury Avenue, BH10 4HF
1960	*Holbrook, H. S., B.SC., C.ENG., F.I.E.E.	17 Ken Road, BH6 3ET
1963	Holbrook, Mrs. M. E.	,, ,,
1972	Holder, F. H.	105 Northfield Road, Ringwood
1972	Holder, Mrs. A. R.	,, ,,
1974	Holland, Miss K.	123 Allens Road, Poole, BH16 5BX
1974	Holmes, Mrs. H. N.	27 William Road, BH7 7BB
1961	Hooton-Smith, Mrs. B. E.	4 Iddlesleigh Road, BH3 7JR
1973	Hull, Mrs. D. M.	28 Roslin Hall, Manor Road
1973	AHull, A. L.	,, ,,
1957	Hunt, W. H.	Flat 1, 5 Alton Road, Poole
1954	*†vHunt, Mrs. A. K., B.SC.	,, ,,
1974	Hypher, P.	9 Hursley Close, BH7 6SE
1969	Jackson, Mrs. J. C.	31 Western Road, Poole
1972	Jarrold, Miss C. W.	4 Stanley Court, Brunstead Road, Poole
1945	Jenkins, Miss P.	School Cottage, Hinton, Christchurch
1973	Johnson, Miss B. M.	61 Wimborne Road, BH3 7AN
1974	Kefford, Miss J. M.	40 James Road, Poole, BH12 1EA
1928	Kendall, Miss, G. J., A.R.C.M.	62 Churchfield Road, Poole
1970	Kent, H. M., B.SC.	62 Camberra Road, Christchurch
1970	Kent, Mrs. M.	,, ,,
1963	Kenworthy, Mrs. J. S. G.	93 Uppingham Avenue, Stanmore, Middlesex
1968	Kernot, Miss F. L.	5 Queens Park Road, BH8 9BP
1965	Kilby, Miss M.	15 Southlands Avenue, Corfe Mullen
1965	Killick, Mrs. K. D.	4 Highlands Road, New Milton
1967	King, Mrs. M. V. B.	66 Albany, Manor Road, BH1 3EN
1971	Knight, Mrs. D. E.	38 Exton Road, BH6 5QF

1968	Laberge, Mrs. M. A., B.A.	10 Radcliffe Court, 51 Manor Road
1968	Laidlaw, W.	14a Newstead Road, BH6 3HJ
1968	Laidlaw, Mrs. M.	,, ,,
1973	Lanceley, R. G.	205 Ashley Road, BH1 4NL
1972	Lanigan, G. W.	8 Bransgore Gardens, Bransgore
1972	Lanigan, Mrs. D. L.	,, ,,
1959	Lawes, A. V.	48 Seafield Road, BH6 3JF
1962	Leake, Mrs. I. B.	21 Langside Avenue, Poole
1970	Ledger, A. L.	7 Albemarle Road, BH3 7LZ
1966	Lee, W. H.	18 Ravenshall, West Cliff Road, BH4 8AT
1967	Lee, Mrs. L. B.	,, ,,
1966	Legge, Mrs. I.	E13 San Remo Towers, Sea Road, BH5 1JY
1973	Lemmon, Mrs. K. M.	22 Marchwood, 8 Manor Road, BH1 3EY
1961	Lewis, Miss D. M.	C2 Twynham Court, Dean Park Road, BH1 1JB
1973	Lewis, H.	15 Cranemoor Avenue, Highcliffe, Christchurch
1973	Lewis, Mrs. S.	,, ,,
1973	Lewis, Mrs. M.	61 Poole Road, BH4 9BA
1970	Lilly, Mrs. P.	78 St. Lukes Road, BH3 7LU
1973	Lister, Dr. M., M.SC., PH.D.	6 Katterns Close, Christchurch
1934*†	vLowther, Miss D. M., B.SC.	15 Mayfield Avenue, Poole
1971	Lumley, H. B.	43 Jamieson Road, BH9 2QQ
1972	Lunn, H. B., F.R.I.C.	39 Wellington Avenue, Highcliffe, Christchurch
1972	Lunn, Mrs. M. J.	,, ,,
1969	McAlpine, Miss G., B.A.	10 Western Avenue, Barton-on-Sea
1973	McAughey, Mrs. N.	B9 Exbourne Manor, 37 Christchurch Road, BH1 3NS
1956	McClay, H., M.S.M., A.C.I.I.	6 Fountain Court, Durley Gardens, BH2 5HZ
1958	McClay, Mrs. D. G.	,, ,,
1974	McMullin, Mrs. E. G.	113 Alumhurst Road, BH4 8HS
1970	McNish, Mrs. B.	61 Irving Road, BH6 5BH
1973	Maddox, C. B. M.	31 Egerton Road, BH8 9AY
1956	Maddox, Mrs. L. M.	,, ,,
1969	Mansfield, J. H. O.	28 Barrie Road, BH9 2XE
1970	Mansfield, Mrs. F. M.	,, ,,
1959	Marriette, Miss G. A.	4 Mansfield Avenue, Poole
1946	Marshall, Miss D.	76 Palace View, Bromley, Kent
1967	Martin, F. B., F.C.I.I.	C25 San Remo Towers, Sea Road, BH5 1JT
1970	Masters, Capt. L. H. J.	15 Fairways, Ferndown
1970	Masters, Mrs. B. J.	,, ,,
1964	LMasters, Miss K. F.	10 West Way Close, West Way, BH9 3DR
1974	Mayhew, Mrs. M.	D6 Kings Walk, 19a Knyveton Road, BH1 3QG
1973	Merry, D. F.	10 Victoria Gardens, Fordingbridge
1973	Merry, Mrs. H. E.	,, ,,
1956	Middlemast, A. H.	86 Hengistbury Road, BH6 4DJ
1956	Middlemast, Mrs. M.	,, ,,
1971	Middleton, Miss M.	24 Cudlow Avenue, Rustington, Sussex
1964	Middleton, W. J.	74 Compton Avenue, Poole
1956	Mills, Miss N.	35 Compton Avenue, Poole
1959	*Mitton, J. C., A.C.A.	3 Gainsborough Road, BH7 7BD
1970	Mitton, Mrs. M.	,, ,,
1971	Mollison, W., F.R.I.B.A.	19 Waterford Gardens, Highcliffe, Christchurch
1971	Mollison, Mrs. D. E.	,, ,,
1971	Monan, Mrs. V. G.	38 Exton Road, BH6 5QF
1957	Moore, W.	139 Alder Road, Poole

1972	Moore, W. H.	13 Eldon Road, BH9 2RT
1973	Moore, Mrs. L.	,, ,,
1959	Morgan, Comm. S. T., O.B.E.	Bracken Cottage, Blissford, Fordingbridge
1973	Morgan, Mrs. B. M. D.	,, ,,
1973	Morris, Mrs. E. M.	A5 St. Catherines Court, Christchurch Road BH1 3NS
1973	Morris, T. E.	Sandpit, Frogham Hill, Fordingbridge
1973	Morris, Mrs. J. F.	,, ,,
1965	Murch, Mrs. O. E.	4 Highlands Road, New Milton
1973	Nash, G., M.A., F.R.A.S.	29 St. Johns Road, Poole
1967	Nicklen, Mrs. L. V.	77 Holdenhurst Avenue, BH7 6RB
1971	Nisbet, Mrs. G. W. M.	47 Wimborne Road, Colehill, Wimborne
1968	Noll, Miss C. F.	2 Pinecliff Avenue, BH6 3PZ
1970	Norris, Mrs. D. M.	34 Cranbrook Road, Poole
1970	ANorris, Miss H. E.	,, ,,
1974	Norton, Mrs. B. M.	15 Dewlands Park, West Close, Verwood
1957	Odell, Mrs. G. B.	Arncott Hall Hotel, Poole Road
1970	Offen, E. C.	4 Ranelagh Road, Highcliffe, Christchurch
1970	Offen, Mrs. M. J.	,, ,,
1950	†vOgle, Miss U. M.	2 Frankland Crescent, Poole
1971	Oldham, F., J.P., M.A., B.SC., F.INST.P.	19 Dingle Road, BH5 2DP
1971	Oldham, Mrs. D. A.	,, ,,
1972	Ottley, P. W., C.ENG., M.I.E.E.	5 Webbs Close, Ashley Heath, Ringwood
1974	Ouzman, Mrs. J.	10 Southwick Place
1968	Padwick, Mrs. M. D.	8 Arlington House, Clarendon Road, BH4 8AJ
1958	Page, W. E., M.A.	14 Grove Road, BH1 3DB
1970	Parish, D.	5 Venator Place, Munster Park, Wimborne
1970	Parish, Mrs. F. M.	,, ,,
1969	Parkinson, J. G.	45 Belle Vue Road, BH6 3DF
1969	Parkinson, Mrs. M. K.	,, ,,
1974	Parr, C. C.	3 Dolphin Court, The Avenue, Poole
1974	Parr, Mrs. G.	,, ,,
1968	Parsons, Miss M. W.	3 St. Margarets, St. Valerie Road, BH2 6PE
1974	Patterson, Mrs. I. R. S., M.B., CH.B., D.P.H.	70 Meon Road
1971	Pawson, Miss K. M.	39 Queen Mary Avenue, BH9 1TT
1963	Payne, Miss H. I.	83 St. Lukes Road, BH3 7LS
1973	Payne, Mrs. M. R.	1789 Wimborne Road, BH11 9AX
1970	Peake, E. C., F.Z.S.	582 Ashley Road, Poole
1916	*LPenrose, Miss F.	Little Picket, Hightown, Ringwood
1916	*†vLPenrose, Miss M., B.SC.	,, ,,
1948	Perceval, Mrs. W.	7 Benellen Avenue, BH4 9LU
1963	Perry, W. F., B.SC.	117 Portland Road, BH9 1NG
1971	Phillips, Mrs. E. W.	9 Gorsecliffe Court, Boscombe Spa Road, BH5 1AW
1953	*Pickering, V. T.	Francesca, Hightown, Ringwood
1953	Pickering, Mrs. C. G.	,, ,,
1959	Pierce, Mrs. E. K.	4 Mansfield Avenue, Poole
1973	Pinson, D. J.	24 Maundeville Road, Christchurch
1966	Poole, Mrs. I.	23 Spur Hill Avenue, Poole

1971	Price, Miss E.	9 Windemere Road, BH3 7LF
1967	Prideaux, Miss C.	Upmoor, 28 Ravine Road, Poole
1969	Pryor, R. A.	8a Queens Park West Drive, BH8 9BY
1973	Puckett, Mrs. M.	47 Somerley Road, BH9 1EN
1974	Purcell, W. J., M.B.E., CH.ENG.	2 Overbury Manor, 73 Branksome Wood Road, BH12 1HS
1967	Purdy, Mrs. K. M.	158 York Road, Broadstone
1974	Ramsden, F.	43 Coy Pond Road, Poole
1974	Ramsden, Mrs. E. M.	,, ,,
1974	Randall, K. S.	8/7 Portarlington Road
1951	LRead, Mrs. H. A.	15 Carbery Avenue, BH6 3LL
1967	LRichardson, Miss A. K.	10a Albert Road, BH1 1BZ
1966	Robbins, Miss R., M.SC.	52 Burton Court, Chelsea, S.W.3.
1973	Roberts, D. J.	19 Acres Road, BH11 8ST
1974	Roberts, Brig. W. P. T., C.B.E., M.B.I.M.	Trenithy, Blackwater Drive, Wimborne
1974	Roberts, Mrs. F.	,, ,,
1973	Roberts, Mrs. V. L. M.	7 Beaulieu Road, Christchurch
1949	Robertson, Mrs. M.	41 Christchurch Road, BH1 3NS
1969	Robinson, J., B.SC.	39 de Lisle Road, BH3 7NG
1970	Robinson, Mrs. K. E.	,, ,,
1964	Rose, Mrs. D., M.A.	Flat 43 Hinton Wood, 17 Grove Road
1967	Rosewood, S. J., F.I.L.	Cleeve Court Hotel, Knyveton Road
1963	LRossiter, Mrs. D. M.	5 Park Homer Road, Colehill, Wimborne
1970	Rowe, Miss L. M.	23 The Bluff, Headswell Crescent, BH10 6LQ
1963	Rushton, Miss K. M., M.B., CH.B., M.SC.	20 Greenways, Highcliffe, Christchurch
1967	Russell-Cotes Art Gallery	East Cliff, Bournemouth
1970	LRuston, J. R.	Flat 1, 3 Moorland Road, BH1 3ST
1951	wSalisbury, Sir E., D.SC., F.R.S. F.L.S.	Croindene, Strandway, Felpham, Bognor Regis
1954	Saunders, Miss W. A.	10 Duncliff Road, BH6 4LT
1973	aScott, Miss G. E.	39 Christchurch Road, BH1 3NS
1970	Scott, S. A.	6 The Close, Charlton Marshall, Blandford
1970	Scott, Mrs. L. G.	,, ,,
1971	Seal, Mrs. J. A.	56 Lansdowne Road, BH1 1RS
1960	*Sephton, Mrs. N., M.B., CH.B.	1/4 Talbot Avenue, BH3 7HU
1951	Sewell, Mrs. I.	4 Maunderville Crescent, Christchurch
1971	Shaw, Mrs. G.	E11 Elizabeth Court, East Cliff Drive
1971	Sherrington, Miss D.	57 Gladstone Road West, BH1 4HZ
1968	Shewell, Capt. A. V.	E46 San Remo Towers, Sea Road, BH5 1JY
1972	Shipman, Miss C. A.	50 Francis Road, Poole
1974	Simmons, G. F.	9 Torbay Road, Poole
1974	Simmons, Mrs. P.	,, ,,
1971	Simmons, W. F.	166 Shelbourne Road, BH8 8RA
1971	Simmons, Mrs. G. L.	,, ,,
1963	Simpson, Mrs. C.	46 Sunningdale, 28 Braidley Road, BH2 6JX
1959	Slicker, Miss H. R. M.	133 Seafield Road, BH6 3JL
1973	Smith, Mrs. B.	8 Balmoral House, 1 Suffolk Road South, BH2 6BQ
1970	Smith, G.	1 Beechwood Lodge, 24 Portarlington Road BH4 8BY
1970	Smith, Mrs. G. M.	,, ,,
1974	Smith, J. E.	13 Chigwell Road, BH8 9HW
1973	Smith, Miss V. H.	15 Bellevue Gardens, Belle Vue Road, BH6 3DB

1971	Southworth, T. C., O.B.E., B.SC.	15 Chine Crescent Road, BH2 5LG
1971	Southworth, Mrs. N. K. G., M.A.	,, ,,
1962	Sparks, Miss A.	12 Joanna Close, Downton, Salisbury
1962	Sparks, Miss M.	,, ,,
1965	Staples, E. G., M.A.	7 Lindsay Park, Linsday Road, Poole
1969	Stephens, Mrs. G. B.	24 Cavendish Road, BH1 1RF
1962	Stiff, Miss F. A.	A16 Twynham Court, Dean Park Road, BH1 1JB
1973	Stone, Miss M. G., B.A.	134 Castlemain Avenue, BH6 5ER
1967	Strain, W. S., M.A.	65 Farm Lane North, Barton-on-Sea
1969	Suckling, Mrs. D.	Venn, Lamerton, Tavistock
1969	Sykes, Miss R. B.	4 Crescent Road, BH2 5SS
1972	Symes, Mrs. C. E.	52 Lowther Road, BH8 8NR
1955	Taylor, Mrs. B.	164 Belle Vue Road, BH6 3AH
1971	Taylor, Mrs. H. I.	70 Tuckton Road, BH6 3HT
1967	†vTeasdill, G., F.M.A., F.R.S.A., F.R.N.S., F.Z.S.	99 Carbery Avenue, BH6 3LP
1967	Teasdill, Mrs. N. A.	,, ,,
1965	Thomas, W. C.	Flat D, Laverstock, Boscombe Cliff Road, BH5 1JN
1965	Thomas, Mrs. G. M., M.A., B.LITT.	,, ,,
1973	Thomasin, Miss C.	4 Westfield Park House, Spencer Road, Ryde
1964	Thorne, Mrs. M., B.A.	2 Chestnut Avenue, Uddens Cross, Wimborne
1970	Tipper, Miss N.	6 St. Michaels Flats, Cambridge Road, BH2 6HA
1965	Todd, Miss E. C.	Flat A, Pendennis, 7 Derby Road, BH1 3PU
1973	Trenbath, D. R.	29 Danes Close, Barton-on-Sea
1973	Trenbath, Mrs. E. M.	,, ,,
1973	Trevor-White, J.	3/40 Tower Road, Poole
1973	Turnbull, Miss A.	385 Holdenhurst Road, BH8 9AN
1949	*Turner, G. A.	4B Wimborne Road, BH2 6NG
1972	Tyler, Miss L. I.	43 Brackendale Road, BH8 9HY
1968	Vaughan, Miss J. M.	29 Barrie Road, BH9 2XE
1968	Wagstaff, Miss M. V. D.	38 Westfield Road, BH6 3AR
1967	Walker, Dr. G., M.B., CH.B., D.P.H., B.SC.	E16 San Remo Towers, Sea Road, BH5 1JY
1966	*Walker, H. G., LL.B.	Manor Farm, Wootton, New Milton
1971	Wall, Mrs. M. E.	25 Dulsie Road, BH3 7DY
1974	Wall, T. R.	8 St. Mary's Road, Ferndown
1961	Wallace, Miss J. B., B.SC.	10 St. Ives Park, Ringwood
1973	Warwick-Haller, S. W., M.A., LL.B.	Acres Down House, Minstead
1973	Warwick-Haller, Mrs. G. M. S.	,, ,,
1973	AWarwick-Haller, Miss S. J.	,, ,,
1974	Watson, Mrs. V. L.	4 Neville Court, Derby Road
1972	Watson, W.	Cottonwood Hotel, Grove Road, BH1 3AP
1972	West, A. L.	Castle Mount, St. Valerie Road, BH2 6PQ
1961	Weston, Miss S. A.	Flat 1, 19 McKinley Road, BH4 8AG
1972	Westrap, H. A.	14 Aldridge Road, BH10 5NN
1970	Wheeler, H. P.	43 Belle Vue Road, BH6 3DD
1970	Wheeler, Mrs. L.	,, ,,

1924	*Whitaker, Miss E. M.	22 Somerset Road, BH7 6JH
1972	White, Mrs. E. G.	85a Southbourne Overcliff Drive, BH6 3NW
1963	White, Miss J.	23 Pinewood Road, Poole
1974	Williams, D. A.	12a Glenfern Hall, 12 Glenferness Avenue, BH4 9NG
1970	Williams, R.	62 The Avenue, Oak Tree Farm, St. Leonards
1972	Wills, Dr. G. O., B.SC., PH.D.	20a Beechwood Avenue, BH5 1LY
1972	Wilson, F. W., F.C.I.S.	9 Pascoe Close, Poole
1972	Wilson, Mrs. E. M.	,, ,,
1960	Withers, A. E., F.A.I.	E41 San Remo Towers, Sea Road, BH5 1JY
1960	Withers, Mrs. D. E.	,, ,,
1948	Wood, Miss E. B., B.SC.	4 New Park Road, BH6 5AB
1971	Wood, Mrs. D. L.	15 Warwick Court, 136 Richmond Park Road, BH8 8TP
1949*†v	Wray, Dr. D. A., M.A., PH.D., F.G.S.	42 Canford Cliffs Road, Poole
1956	Wray, Miss J.	,, ,,
1973	Wright, Miss E. E.	49 Christchurch Road, BH1 3PA
1967	Young, Mrs. G.	3 South Court, Milford-on-Sea
1958	*Yule, Mrs. M. P.	Little Orchard, Godshill, Fordingbridge

Presidential Address

Conservation in Practice

by D. Small, Deputy Surveyor of the New Forest

Delivered before the Society on 19th October, 1974

The Seventh World Forestry Congress in 1972 examined critically the status and responsibility of the forestry profession. It declared "Foresters have been pioneers in the struggle to conserve and rationally to use renewable resources. They cannot but review with satisfaction the growing concern about environmental quality and the need for proper management of the world's renewable resources. Foresters recognise that forestry is concerned not with trees but with how trees can serve people. The forester, being a citizen as well as a professional, has a clear duty and responsibility to ensure that his informed judgment is heard and understood at all levels of society. His allegiance is not to the resource but to the rational management of that resource in the long-term interests of the community".

I should like to show you, today, that the management of the New Forest, which is the responsibility of the Deputy Surveyor, has been and will be a continuing struggle to protect and manage it as a natural renewable resource. An analogy would be that the forest is likened to a spider's web, in which all species of wild life including man are represented at a link of the web. Undue pressures exerted on any part would vibrate the whole and if too great a pressure a bond would be broken. My responsibility is to attempt to maintain this web complete in a healthy and strong condition, and usually operating from the centre, but without the same intention as a spider. I define conservation as "the use and effective management of a natural resource".

Conservation is not a new science and undoubtedly the first conservationist involved in the New Forest was William I who in 1079 created his first 'New' Forest in this corner between the Solent and the sea, the land consisting at that time of relatively infertile woodland and a furzy waste sparsely scattered with farms and homesteads. The act of afforestation in Norman times and indeed earlier under the Saxon kings, transformed the whole neighbourhood into a Royal hunting preserve.

The New Forest, today, reflects the history of its woodlands and open spaces. The Timber Inclosures, some of which have been open for decades, together with the Crown freeholds, take up less than one-third of its area, that is, 21,360 acres. The larger part is open forest consisting of over 45,000 acres of grassland, heath, scrub and the ancient and ornamental woodlands, the ragged descendants of ancient inclosures now developing as natural oak and beechwoods; the whole is roamed by the commoners' animals, numbering between 5,000 and 6,000 ponies, cattle and pigs and approximately 1,500 wild deer who have survived both Sports of Kings and an Act of Parliament in 1851 to exterminate them. Today visitation by the public now reaching four million annual visitors exerts an additional and more rapidly destructive pressure on the Forest. There are three main land use areas, *i.e.* the Statutory Timber Inclosures, Ancient and Ornamental Woodlands and the Open Forest

Waste. I will give a brief description of the important aspects of each of these land use areas.

First, the Statutory Inclosures:

The Statutory Timber Inclosures have been created since the Act of 1868 and under further various Acts of Parliament for the purpose of growing timber and to be free from all Rights of Common.

It was in the 1877 New Forest Act that a major conservation principle was established when it stated "that it was lawful for Her Majesty to cause any part of such land to be enclosed, planted, laid open, replanted or re-enclosed, provided that the whole quantity of such land under inclosure does not exceed, in any one time, 16,000 acres". This ensured the survival of the open forest waste as unplantable land, and the continuity of forestry management, forestry being the art and science of growing trees.

An additional important principle was established in the same Act which states "Provided that in cutting timber or trees for improving the woods or for sale, care shall be taken to maintain the picturesque character of the ground and not wholly to level or clear the woods, but to leave from time to time a sufficient number of the most ornamental trees, and to keep the wood replenished from time to time by protecting self-sown plants, or by planting trees in a vacant space having regard to the ornamental as well as the profitable use of the land." This principle clearly recognised the visual amenity qualities of a forest plantation as well as its need to be renewed.

It may be of interest that of the total area inclosable 21,360 acres have been divided into over 7,100 management sub-divisions of an average area of three acres, each providing a diverse and variable management and biological unit. All commoners' animals are excluded from these Inclosures by fences, grids and gates. Forestry has been practised within for many hundreds of years for the purpose of growing timber and these activities have resulted in a diversity of scenery and biological habitats consisting of various age woodlands much valued by naturalists. The protection from grazing of common animals has resulted in a rich strata of vegetation which has become a valuable alternative biological resource to those in the open forest.

An important feature of these Inclosures is the profuse natural regeneration particularly of Scots Pine, Douglas Fir and Beech and the intimate mixtures of conifers and broadleaves. The oldest planted oak is in North Bentley Inclosure which was planted in 1700 and has been group selection felled with some 40 to 100 year-old natural regeneration of oak providing the next crop. The present balance by area between oak and beech within the Inclosure is 75% oak to 25% beech.

These Inclosures, in 1974, harbour some 1,500 head of deer, including *Red, Sika, Roe and Fallow.* It is of some interest that in 1848 evidence given before the Duncan Committee that the number of deer in the Forest were counted to be 4,582. In a study of an Oxford woodland over 4,000 species of wildlife were recorded and it is our belief that our Statutory Inclosures contain a similar diversity. The Inclosures have their own special species besides forming extensive refuges for the forest mammals, including deer, badgers and foxes. Census work carried out by the Forestry Commission and aided by the newly formed Badger Protection Group since 1971 confirm that the population of badgers is estimated to be 273 adults in 91 active

setts. In 1973 a new attempt was made to estimate by a sampling system of 20% of the New Forest of active fox earths. This survey yielded evidence that the fox population in May-June 1974 was between 480 and 680 in over 100 active dens with cubs. The annual kill of foxes by Masters of Foxhounds is between 40 and 50 brace and it is considered that the population of the New Forest foxes is stable. Breeding birds include Crossbills, Goldcrests and Firecrests, all of which are associated with conifers, whilst the old oak plantations possess a flora and fauna sometimes approaching that of the unenclosed woodlands in variety. Notable amongst the population of predator birds are the Buzzards, Kestrels, Sparrowhawks and Tawny Owls, whose habitats are protected by careful management systems. The British Trust of Ornithology have assessed that to maintain a satisfactory diversity of bird populations the relationship between conifers and broadleaves should be one acre of broadleaves to 10 acres of conifers. Overall, the relationship between conifers and broadleaves, including the Open Forest in the New Forest appears to be of similar proportions.

Now I should like to deal with the Ancient and Ornamental Woodlands.

These Open Forest woods owe their origin to early encoppicements, defenced Inclosures and the natural evolution of scrub to high forest often on the perimeter of existing old woods and open parkland.

Described in the New Forest Act of 1877 as 'Ancient Ornamental Woods and Trees', they consist of very old beech and oak often pollarded with, in places, an under-storey of holly surrounded by open parkland, grass lawns, open heath, bogs and thickets of birch containing holly, oak, some ash and sycamore.

All these open woodlands are subject to ancient rights of common including common of pasture, pannage, turbery, fuelwood and marl, also browsing and grazing of wild deer. These woodlands constitute an internationally unique ecological reserve. The increased public awareness of the variety, beauty and peace of these woodlands and open spaces are placing on them a further pressure, that of public visitation.

Much has been written on their structure and evolution and it was not until 1963 that the Forestry Commission completed a factual survey of these woodlands. This survey did not, however, obtain adequate information on the occurrence or lack of natural regeneration, especially as many writers have stated that until common grazing was prevented these woodlands would not regenerate themeselves. In 1970-71 a new assessment was undertaken by the Forestry Commission to evaluate the occurrence of natural regeneration and as a result of the generous offer of the Ordnance Survey to use their first Ordnance Survey map of 1867, this study was enlarged to evaluate the origin and changes of woodland boundaries. This was an important study as it provided some useful facts on which to base the future management. The conclusions from this survey were as follows:

Of all the broadleaved high forest surveyed—73% contained an adequate successor crop and 75% of these woodlands were predominantly beech and appeared to be of artificial origin.

The areas of high forest without an adequate successor crop or natural regeneration are the older more uniform woods where breaks in the canopy are mostly recent.

The area of broadleaved high forest has increased substantially since 1867 at the expense of former park or waste by natural regeneration. Since 1867 the total increase in high forest has been 1410 acres in a period of 105 years or an annual average of 13 acres. The uninclosed woodlands no longer have any strict parallel in Britain and are said by the Nature Conservancy Council to be the finest relics of relatively undisturbed deciduous forests in Britain and possibly in the lowlands of Western Europe. Their essential ecological characteristics are their age structure, abundance of mature, senile and decaying trees and rich epiphytic lichens and moss flora with insects, birds and bats. Recent research work has recorded that there are over 1,000 species of insects, particularly beetles associated with decayed wood. The large bird population of these woods depend mainly on the rich invertebrate fauna which, in turn, is associated mainly with abundant old timber. Bird characteristics of these woods include many which are rather locally distributed elsewhere such as the Red Start and Wood Warbler. In the holes and crevices of decaying timber will be found Woodpeckers, Nuthatch and the Tree Creeper. At the woodland edges and in the glades are two forest specialities, the New Forest cicada and the wild gradioli, neither of which occurs elsewhere in Britain.

I now turn to the third land use category—that is the Open Forest Waste.

In contrast to the Statutory Inclosures and the Ancient and Ornamental Woodlands there remains the non-wooded section of the Forest, totalling 35,650 acres containing grass lawns, open heaths, bogs, thickets of gorse and birch and ponds, all subject to ancient Rights of Common and chiefly grazed by commonable animals and wild deer. The chief vegetation types as recorded by the Nature Conservancy Council in 1971 and expressed as a percentage of total area of waste are 2% forest lawns and valley bottoms; 38% is *agrostis/molinia*; 40% *calluna* heathland and 20% valley bogs and wet heaths. The whole of the Open Forest Waste is divided into some 650 management units averaging about 55 acres in area.

It is perhaps not often appreciated that the Forestry Commission is responsible for the management of the Open Forest Waste. The Verderers of the New Forest are responsible for the control and welfare of the commoners' animals. The Forestry Commission has a statutory obligation under the 1949 Act as appears to them reasonably necessary that the grazing will be kept sufficiently clear of coarse herbage, scrub and self-sown trees and that the Forest will be properly drained and maintain culverts and bridges.

The Open Forest Waste has some biological features which are of importance. In the words of the Nature Conservancy Council it is thought that few of the remaining areas of heathland in lowland Britain are large enough to support indefinitely many of the characteristic plants and animals. The New Forest is thus ecologically important because it offers the best chance of conserving the most complete spectrum of heathland, flora and fauna. The fauna includes such birds as the Wood Lark, Stone Chat, Dartford Warbler and Night Jar, with reptiles like the sand lizard and smooth snake, butterflies include such as the attractive Silver Studded Blue and Graylings. All these species have declined in Britain and the most important contributive factor has been the loss of their habitats. All occur in the New Forest and for some time it is their only stronghold in this country. The New Forest bogs have the richest habitats and the flora include many local and rare

species, such as the Marsh Gentian and the Bog Orchid. The bogs support a rich invertebrate fauna including the tiny Damsel fly and the impressive large Marsh Grasshopper. These bogs come alive in the spring with the calls of the breeding lapwing, redshank, curlew, snipe and other marsh birds.

I have given you a very brief description of some of the complex aspects of the New Forest, and the interlocking 'web' in which all the wildlife are interdependent on the diversity of the overall habitat.

In 1971 the Minister of Agriculture presented a mandate for the future management of the New Forest in which he clearly stated that the New Forest must be regarded as a national heritage and priority given to the conservation of its traditional character. I had the pleasure of preparing the Management Plan for the period 1972 to 1981 to incorporate and implement management decisions to fulfil the principles of this mandate. This document was the first major document subject to public consultation and I am happy to say that after an intensive 12 months discussion with all those concerned this Management Plan has been accepted. I will deal with the management policies and the implementation decisions in the three land use categories, *i.e.* the Statutory Inclosures, the ancient and ornamental woodlands and the open forest waste.

First, let me deal with the management policies within the Statutory Inclosures.

The Statutory Inclosures with their intimate diversity by area and age of species will be regarded as an essential compound of the traditional character of the Forest. The 1971 area of conifers and broadleaves will be retained during the period of this plan until further assessment evaluates additional areas likely to produce vigorous and healthy broadleaves. Large clear fellings will be avoided so as to retain the present intimate structure and diversity of age and species. To support the diversity of flora the minimum of road and rideside cutting compatible with road engineering specifications will be carried out. Certain of the forest rides have already been designated for cutting restraints. Woody species valuable to insect life cycles will be retained in young plantations provided they do not suppress planted trees.

Broadleaved plantations will be managed primarily to perpetuate their visual amenity and conservation value, producing by sound sylvicultural systems hardwood timber. They will be managed for as long as their usefulness as a source of timber is safeguarded.

Areas of outstanding ecological significance in broadleaves, as designated by the Nature Conservancy Council in 1971 will have joint management systems prepared for the period of this plan. These are known as the Nature Conservancy Category A Stands and are chiefly the oldest broadleaved stands in the Inclosures. Some old decaying and dying trees throughout the Inclosures will be retained so long as their retention does not endanger forest hygiene or the invited public on forest walks and upon rides.

All broadleaved crops up to 200 years of age in 1972 will be inspected and, where necessary, thinned to ensure their health and vigour. Such treatment will be carried out at 10-year intervals.

All broadleaved stands which normally reach the regeneration period sometime after 200 years of age will be manipulated by the removal of trees, sometimes singly and sometimes in small groups, depending on the progress of natural regeneration and whether artificial regeneration is

required. In mixtures of oak and conifer, oak will be favoured to produce ultimately the final crop of oak.

The conifer plantations will be managed by sound sylvicultural systems to produce high quality softwood timber with, in selected areas, greater emphasis on their existing potential recreational and conservation value. The conifer plantations will have two separate felling treatments—one economic life cycle which will be between 45 and 70 years of age and the other for conservation and recreation life cycles up to 120 years of age, accompanied by group selection systems and the encouragement of natural regeneration. In these plantations designated for amenity regeneration fellings will be carried out some 60-70 years in advance of their final felling to encourage appearance and establishment of natural regeneration from their parent trees.

Thus you will see that the Statutory Inclosures are a constant renewable resource managed for many different purposes and by these management decisions their intimate diversity both visual, sylvicultural and conservation value will be retained and perpetuated.

Now I turn to the Ancient and Ornamental Woodlands where special conservation considerations have been given.

These woodlands will be regarded as a component contributing to a national heritage, priority given to the conservation of the traditional character and will be conserved without regard to the timber production objectives. Artificial regeneration practiced in the past will not now be considered unless there are special landscape and recreational requirements to do so.

The loss of some traditional forest lawns may be compensated for by the removal of some natural birch and thickets but only with the agreement of the Nature Conservancy and the Verderers. The Nature Conservancy Council will be assessing these Ancient and Ornamental Woodlands and will assist the Forestry Commission in determining the detailed management proposals. Many of the marginal areas to the older woods are regenerating freely with oak and beech and are designated as emergent high forest and where identified as being established will be added to the area of the Ancient and Ornamental Woodland.

Those areas of high forest returning through death and decay to the open forest will be allowed to do so but where public access is gained and accepted, dangerous trees will be removed.

Those Inclosures made under the New Forest Act 1949 and considered successfully regenerated will continue to be protected, some from commonable animals and some from deer, for long-term study purposes. The remainder are being de-fenced and returned to the open forest. Certain areas of the Ancient and Ornamental Woodlands are being considered for an experimental period of 10 years to be inviolate for management purposes.

Thus you will see that management of these Ancient and Ornamental Woodlands now depends on the study in depth by the Nature Conservancy Council in order to determine scientific and ecological basis for management. I believe this Society can play an active part in contributing to further knowledge of these woodlands.

Turning now to the last land use type—the Open Forest Waste. The Open Forest Waste must be safeguarded as a component of this national heritage

and priority given to the conservation of its traditional character with an acceptable balance on the requirement for grazing, biological diversity and the stability of surrounding woodlands and peaceful enjoyment by the public. I believe the following management decisions arrived at for the future management of the Open Forest Waste are the first ever determined by the managers of the Forest.

The present area of natural vegetation, *i.e.* heath and gorse, will be rehabilitated only for the purpose of rejuvenation. This is to ensure an adequate representation of old heather and gorse, dominant communities necessary to support resident fauna and are made with special references to the survival of sand lizards and smooth snakes.

The area of reseeded grassland, including fire breaks and grazing strips, is not to be extended beyond the area as defined in 1972.

The cutting and burning of heathland and gorse is only to be carried out on agreed rotations based on commoners and Nature Conservancy Council's proposed programmes. The annual programme of burning and cutting of the heathland has been reduced since 1963 from 2,000 acres to a programme of some 800 acres in 1974. Experimental work is being carried out between the effectiveness of rejuvenation of gorse and heather by cutting versus burning. The removal of bracken litter in autumn is now being attempted this winter to ascertain if grassland can be improved without the loss of protection of bracken to specialised flora.

Drainage and access improvements will be undertaken only when the benefits derived improve grazing, ensures the safety of the commoners' animals and provides adequate access and stability to the surrounding woodlands, together with retention of the health of the conservation assets.

The number of commonable animals permitted to graze on the open forest waste should be limited to that which the existing vegetation can support without deterioration.

The improvement of grazing by swiping, or the application of artificial fertilisers by the Verderers may now be confined to grassland, bracken grassland already established in 1972 and only with the agreement of the Forestry Commission and the Nature Conservancy Council.

The recreational potential of all the forest ponds, lakes and rivers will be determined by consultation with the River and Fisheries Authorities and with the Nature Conservancy Council. A complete survey of the forest ponds was completed in 1973 and it is not common knowledge that most of these forest ponds have been restocked with various fish over many years and in some cases even goldfish still survive.

You will recall that the 7th World Forestry Congress drew attention to the fact that the forester was concerned not with trees but with how trees can serve people. With the ever-increasing public pressure being exerted on the Forest it was necessary to provide measures to protect the Forest and at the same time afford opportunities for people to see and enjoy its unique structure and scenery. The management objectives, therefore, for recreation, are to accommodate the existing public pressures within the Forest, without fundamentally changing its existing character and to control this pressure with the minimum of conflict between the many diverse interests and to provide and maintain a high standard quality of facility.

Car parks and camping areas are being dispersed throughout the Forest in suitable localities at which visual amenities, soil conditions and services are satisfactory. Associated with the developed facilities are areas of open forest protected from motor vehicle access. A maximum capacity for car parking as a first phase was determined at 6,000 car parking spaces and for camping at 5,000 camping pitches. The overall capacity to be reviewed in 1975/76. The present programme is some two-thirds towards completion of these targets.

Monitoring of the users' requirements both for day and overnight visitors has been undertaken, especially by aerial photography and questionnaires. This is to ensure that future management decisions are based on factual evidence. Specialised recreational activities such as horse riding, pony trekking, fishing, model aircraft and boat sailing, barbecues and sponsored walks and orienteering are being accommodated and co-ordinated, I hope without conflict to any other users of the Forest. Some measure of present-day pressures for specialised activities can be seen from the following figures. There are between five and six thousand commoners' animals grazing the Open Forest Waste accompanied, at times, by some 1,000-1,500 head of deer and at certain seasons of the year over two million honey bees work away on the calluna heaths; over 700,000 campers have spent the evening in one season between April and September in 1974 and at each peak weekend day over 21,000 people are either parking or picnicking throughout the Forest. Young men training in compass navigation; orienteerers, walkers, sponsored walkers —all seeking peace and pleasure. In response to information and to the provision of prepared waymarked forest walks—over 150,000 people in one year have chosen this form of enjoyment. The list of specialist interests is endless and we get new requests almost weekly. The fact that we are able to accommodate all these activities and still maintain this Forest in a healthy renewable condition pays credit to the Forestry Commission staff whose life is dedicated to the Forest's future.

I am not concerned so much with the present generation as I am with the generation of the future; that is, those thousands of schoolchildren who come to the Forest, in many cases without any preparation, to learn from and use this asset for their understanding of environmental management. The Forestry Commission has prepared an Educational Resource Pack in which guidance prepared by educationalists is available to school parties prior to and during their visit. Progress is being made at present in co-operation with the Local Education Authorities to review this Educational Resource Pack and give the greatest benefit to the maximum number of schools.

An important aspect of all conservation measures undertaken in the Forest is to inform the visiting public as to the existence of facilities and how best they may enjoy and understand this complex fragile area. To meet this end, we have, with the aid of the Hampshire County Council, an Information Caravan in Lyndhurst Car Park, seven Information Camping Offices at all the major camping sites, a small Reptile Information Centre at Holidays Hill and we hope to develop the interpretation of various aspects of the Forest.

Finally it is, in my view, most important that an area so unique as the New Forest is under the constant care, supervision and management by the

forestry profession that is qualified and cares sufficiently to ensure that the future generations will, indeed, sit, walk, camp and see a renewable natural resource. It is my sincere hope that it survives the thoughtless and selfish attitudes expressed by minorities of this nation's sympathetic population.

The part this society can play in the future conservation of the New Forest is not only to support this management system but to aid it by more and more fact-finding that will aid future decisions. It should make available to schools and educational authorities the wonderful collection of examples of the country's wildlife and historical past in a form of display that is easily understood by the layman.

I hope I have demonstrated that conservation is not a subject to idly talk about—it is a management system put into practice in the sincere belief that the New Forest will survive.

Report of Council for the year ending 30th September, 1974

This is the 71st occasion on which the Council of the Society looks back over the year that has passed and forward to that ahead.

Over these years the contents of its Report have varied with the changing circumstances of each succeeding year, but one content has remained constant —the influence of members who have guided the Society's policies and contributed to its success.

It was truly said by Emerson that an institution—an organisation such as our own Society—is nothing more than the lengthened shadow of the men and women who create and sustain it.

Sadly, but inevitably, the Council's Annual Report has to record the passing of one or more of those members and to recall their contribution of effort and scholarship. During the year we have lost one of our senior Vice-Presidents, Mr. H. V. Harris, a member who gave much for the Society's good, and tribute will be paid more adequately elsewhere. We have also lost Miss Horne, who was not only a competent and conscientious librarian but a scholarly lady of great charm and character. We miss the quiet erudition of Mrs. Bircumshaw, who contributed so much of learning to our meetings. Your Council feels that in recent years they may not have given adequate expression of their appreciation and gratitude to those officers who gave their time and knowledge for our benefit but who are no longer with us. They recall with gratitude the efficient service in recent years of men like Mr. Charter, of Mr. Fildes and of Mr. Wood. The success of the Society these members helped to build is their best memorial.

From time to time the Council recognises outstanding service to the Society by appointments as Honorary Members. In 1972-3 Honorary Membership was conferred on Brig. Edwards and Mrs. Yule. During the past year similar appointments have been made in recognition of the long services of Dr. Bell and Mr. Pickering, and, more recently, a similar honour was conferred on Miss Hipperson in recognition of her long and varied services. Two very happy social events celebrated the Diamond Wedding of Mr. and Mrs. Chambers and of Miss Whitaker's Golden Jubilee as a member.

It is certainly true that we have again enjoyed a very successful year, but success can only be measured against some criteria. For this Society, success must be related to the extent to which we have achieved our objectives as a science society and it is as well occasionally to remind ourselves of those objectives as set out in the Rules, *viz.*:

> ". . . the promotion of the study of Science in all its branches and of Public Education, by means of Lectures, Field Meetings, the Reading and Discussion of Papers, and in any way that the Council of the Society shall deem advisable."

Complementary to these objectives, however, is the pleasure we enjoy as members with a mutual interest in the natural sciences by meeting socially after lectures and on other social occasions.

The most important event during the year has been the presentation to Council of a report on the Society's future policy and practice. This was prepared by Mr. Heales, the Hon. Secretary, after months of labour and research, with the able co-operation of his wife, the Hon. Deputy Secretary. The report has been accepted in principle by your Council.

During the year ahead the Council will consider the possibilities for the extension of the Society's educational objectives and the wider sharing of its unique assets. The Council's policy will continue to ensure that the joint objectives of education and social contact are properly related in the best interests of the Society and of its members. We enjoy wide prestige as a science society outside our own membership and the quality of visiting lecturers is evidence of that prestige. It will always be the Council's objective to maintain and encourage those standards which are proper to a science society.

Annual reports for recent years have referred to the financial problems which face societies such as our own and where there is no opportunity to increase income to match increased expenditure. We cannot disguise our problems by talking about productivity agreements and threshold payments or social contracts. We are only conscious of the rapidly increasing cost of essential services such as building maintenance, rates, heating and lighting. These are matters about which you will hear more detail from the Hon. Treasurer who carries out his task with conscientious efficiency. Expenditure on essential repairs and decorations during the year has been exceptional although the benefit of this expense should be enjoyed over several years ahead. Nevertheless the cost of maintaining a building such as this will always be heavy. Our only product is service to members and there are few organisations in this town which provide a service of such variety and regularity for a comparatively nominal fee. Additional sources of income are rare. Thanks to the hard work of Mr. Wilson and Mr. French income from covenanted subscriptions has increased but there is still scope for more benefit from this source.

Steps to combat these financial problems will be the Council's main preoccupation during the year ahead. They will be giving the closest attention to economy and to planned priority in expenditure consistent with maintaining our standard of service to members. They will also consider methods of making the most profitable use of the very valuable assets we possess, this building and grounds, the unique museum, the lending and reference libraries so efficiently maintained by Miss Todd and Miss Hayball. The Council will

consider how best these assets may be used to the Society's advantage. Merely to express concern or alarm at the economic problems we all face will not solve them. We must be ready to investigate and consider all practical means for improvement in the efficient administration of the Society. We are a science society and our problems will have to be tackled scientifically. There will be no easy or quick solution but with wise counsel and careful planning your Council is satisfied that solutions will be found to ensure financial stability as well as an improved service to its members.

The standard of lectures remains high and the Council acknowledges the excellent work of Section Chairmen in providing a more varied and extensive programme throughout the year than many comparable societies. Field meetings are a continued source of delight and learning to many members, and the fact that the five-day meeting to Torquay and many of the coach trips were over-booked is evidence of the excellence with which they have been organised and led.

This report must conclude on the same note on which it began. A society is no greater than the sum of its members. All that we enjoy educationally and socially is the product of effort and energy by very many people, many of whom work quietly and efficiently behind the scenes for our benefit. To them all the Council extends its thanks and appreciation—to Executive Officers and Committee Chairmen, and to all who make the wheels run smoothly. Among so many, names are invidious but without the services of our ever-present and competent projectionists, Mr. Barnes and Mr. Mitton, our lecture hall would be dull indeed, and without the hard work of Mrs. Parkinson and her team of helpers in the kitchen after lecture meetings we should often go home feeling very dry.

The Society has a history of service and achievement of which it can be proud. The Council is confident that with this example in mind and with the assets it possesses today, both personal and material, we can solve our problems and look forward with confidence to many years of happy association in our mutual appreciation and enjoyment of the natural sciences.

Obituary—H. V. Harris

The Society has sustained a loss by the decease, after a long period of illness, of Mr. H. V. Harris, a valuable member known and respected by all who worked with him from 1955 onwards until in recent years failing health limited his activities.

Mr. Harris' scientific interest was in ornithology. Although he modestly refrained from lecturing at the B.N.S.S. he regularly led parties for detailed observations on migrant and indigenous birds, particularly of Poole Harbour and Stanpit Marsh and also badger watching further afield.

His great value, however, was his efficient conduct of meetings, etc., during his five years as Chairman of the B.N.S.S. Included in this period was a long negotiation of the sale of a rather redundant strip of the grounds as deputed to a small sub-committee by the F. & G.P. Largely due to his persistent efforts, a substantial sum was realised which allowed the desperately needed repairs and strengthening of the base of our building and other parts of the

fabric, entire decoration and a new design of the garden, all of which is enjoyed by us today.

Though cordially pressed to become our President, he characteristically declined, but accepted election as a Vice-President.

All his old colleagues are sad at the passing of an enthusiastic friend.

E.C.

Archaeology and History

The vacancy caused by the resignation of Mrs. Clare Simpson from the Chairmanship of Archæology and History, after so many years of faithful service, was a sad event for all of us. We hope that the rest will result in better health for the future and wish Mrs. Simpson well.

In October John Robinson, the former Chairman of Geography, was persuaded to take over the vacant post of Archæology and History, and the first lecture of his term of chairmanship should have been Minoan Crete by Mrs. Simpson, but owing to illness her place was taken by the Deputy Chairman, Mrs. J. C. Earl, who gave an outstanding lecture on Afghanistan and she submitted examples of native work and costumes of ladies, who were heavily veiled in public. Colourful slides made the afternoon most entertaining.

In December the Society had the pleasure of hearing E. B. A. Edwards, B.A. (Cantab), son of Brigadier Edwards, give an address on Russian Icons, with many colour slides of these Russian treasures, of which he has made an intensive study. This lecture was open to the public.

The first lecture of 1974 was given by the President, Miss K. M. Bennetts, on Australian Aborigines and she had gathered her information during her long visit to Australia, and actually meeting the Aborigines in their native places. She said they were people who could respond well to training in all subjects. They were intensively loyal to their own kind and respected each others property. Miss Bennetts enlivened the talk with excellent slides and her wit often caused laughter as well as serious thought on the problem of the Aborigines.

The February lecture was given by John Robinson, the Chairman, who also indicated that he hoped to introduce lectures on every aspect of archæology investigation, exploration and historical map-making. His lecture was on the German technique of Mosaic Preservation, showing the Dionynesian Mosaic of Cologne, slides, pictures and historical anecdotes.

Mrs. J. C. Earl, Deputy Archæology Chairman, gave the March lecture on King John. This was truly historical research with illustrated slides and facts about the true character of King John. There was much discussion from the historians present.

There was no lecture for April.

In May there was a superb travelogue given by Mr. Lee on the Valley of the Nile. It was full of historical and archæological facts and features with splendid slides, many of them taken by Mrs. Lee, who has a flare for photographic aspects unlike most holiday photographs, so that views are works of art as well as informative. A most enjoyable occasion.

Also in May the members visited Abbotsbury Gardens and Chesil Beach. The gardens were very beautiful in the sunshine and the peacocks were an

added attraction. Members had their lunch on the Chesil Beach and the warm sunshine had heated the pebbles underfoot. The day was lovely.

In June, E. A. Oscroft gave his lecture on the History and Development of Bournemouth, he revealed many facts about Bournemouth not generally known and various slides traced changes from landmarks now gone, to modern development and future planning. Mr. Oscroft was thanked by the President.

In July, John Robinson gave the first of two lectures on Buried Treasure, showing examples of the Sutton Hoo, Viking ship Burial, with colour slides and reproduction pictures.

In August, Mrs. S. W. Ouzman gave a splendid talk on New Forest Pottery, and she and a friend came to our museum and photographed some of the pottery pieces we have and talked about them. She told of the flourishing industry in pottery in the New Forest, employing many people from the end of the Roman Occupation throughout the Dark Ages to mediæval times. The following day the members were taken by Mr. and Mrs. Thomas to Singleton, and saw the actual process of pottery making and charcoal burning.

The lecture for September on Tunisia was postponed. John Robinson showed pictures of local and other famous gardens.

October saw part two of Buried Treasure, notably the Mildenhall Treasure, was given by John Robinson. This treasure has been rehoused in the British Museum from the Edward the Seventh Gallery to one of its own along with other notable finds.

We are much indebted to Mrs. Earl, who helped out during the period when Mrs. Simpson was unable to attend due to illness and until the new Chairman was appointed.

John Robinson, Chairman

Botany

In 1973 the Society was unfortunate to lose Mrs. Parish as Chairman owing to the pressure of other commitments on her time. We miss her efficient and cheerful service very much.

Enthusiasm marked the first lectures of the season which were given by some of our most talented members—Squadron Leader Banks, Mr. and Mrs. Parish, Mr. Grossert and Mr. Cooke.

An interesting series of outings followed, including a visit to Dorset to see *Ophrys sphegodes* and *Gentianella anglica.* No less than three outings were led by Miss E. M. Whitaker, who has been a pillar of strength to the Society since she joined 50 years ago. One of the highlights was a visit to Kew in glorious weather. Most of the meetings were well attended, the members filling two coaches to the Kew outing.

Another highlight was the finding of *Gentiana pneumonanthe* in the Forest on August 15th.

The writer was appointed Chairman in the summer and wishes to thank all those who have helped to organise the Section's programme especially Mrs. A. K. Hunt and Miss K. Milner Bennetts.

K. M. Rushton, Chairman

Geography and Geology

Elsewhere in these Proceedings the lecture programmes given during the year under the Geography and Geology Section are listed for easy reference and the content is impressive for the quality of visiting lecturers and the variety of their subjects. Few comparable societies can be as fortunate in this respect and it must be to the Society's credit that speakers of this quality are agreeable to contribute to our programmes.

The variety of subject is apparent when the programmes in one year have taken members to South America, Russia, New Zealand, Lapland, Australia, China, U.S.A. and Turkey. Additionally, we have enjoyed studies of Cornwall and the Stour Valley.

The scholarship and eloquence of our own members, Miss Bennetts, Miss Exton, Mr. Anderson and Mr. Lee, has again been emphasized by their own programmes and it is not surprising that they are often asked for repeat performances. Geology was dealt with in the lecture by Dr. Sparrow on the Record of the Rocks and was also introduced in the Cornish Study, and it is intended to extend the range of talks of geological interest during the coming year.

The coach tour of the Stour Valley under Miss Exton's leadership was a great success and it is hoped that similar events, which provide so enjoyable a method of learning about our own countryside, may be arranged next year.

The large audiences we have enjoyed have been gratifying to speakers and chairmen and our thanks are owed to those members whose services provide us with so many enjoyable afternoons of education and entertainment. Among these many members my special thanks are again extended to the ever-present Mr. Mitton and Mr. Barnes, without whose efficient services in the projection room our efforts would be in vain.

H. C. Heales, Chairman

Physics and Chemistry

Mr. L. G. Smith of the Southampton Dock House gave a follow-up lecture to the tour of the harbour and docks he conducted for the members on their summer visit. A history of the growth of Southampton as a port was beautifully illustrated by a film, after which Mr. Smith dealt with the modern container methods used in the docks.

Many of the problems facing the illumination engineer and their solution was outlined by Mr. A. G. Brown of the Lighting Division of Philips Electrical Ltd. in the second lecture of the season. Sources available today, their correct placing and position for maximum efficient service in industry and the home were described. The importance of colour effects was illustrated in film and demonstration. Mr. Brown also covered the use of heat lamps and lighting technology in horticulture and presented two monographs to our library on these topics.

Corrosion was the subject of a lecture given by Mr. B. R. Leverett of the Bournemouth College of Technology. The phenomenon is identical with the chemical processes in the simple electrical cell. The transfer of electrons in

the passage of the current results in chemical action. The minute impurities in steel and furnish dissimilar metals which when water is present promote electrolytic action. One control is to alloy the metal as in stainless steel. Another method is to cover the metal surface with a sacrificial coating of a soluble oxide of lead or zinc. Insulation is another partial solution where stress and fatigue occurs as at joints in metal pipes. Palliatives in the form of greasing or painting the surfaces are important and the lecturer concluded with the solution of corrosion in the modern motor car.

A lecture on Health Care was given by Mr. G. Davies, Secretary of the Royal Victoria Hospital, Bournemouth. After a brief historical survey of hospital services from mediæval times to the present day, Mr. Davies stated the necessary and sufficient conditions for an efficient National Health Scheme to ensure the maintenance of good health with emphasis on prevention, consideration for care as well as cure. Public health records and statistics for America, Sweden and the United Kingdom were compared as were the incidence of common diseases. The cost of the services in relation to the gross national product of the three countries concerned were outlined. Looking to the future, Mr. Davies underlined the necessity for improved training of doctors, nurses and ancillary staff. Selection of priorities with a limited budget governed all the facilities of the Hospital Service. Today there was more enlightened treatment of the mentally sick but there was still a need for more efficient use of hospital beds, expansion of the Dental Service and more effective co-operation between the family doctor, hospitals and community services.

Mr. Jefferson, of the Bournemouth College of Technology, spoke on Integrated Circuits and Micro-electronics. He traced the sustained growth of the electronics industry in the present century, particularly from the electronic valve to the transistors of today. Silicon, monolithic, thin film, thick film and hybrid integrated circuits were explained and their uses described. This was followed by a short film showing the local manufacture of one particular circuit. The possible future trends were then discussed and an account of the training at the College given. In the summer Mr. Jefferson organised two visits for our members to the micro-electrics department at the College when illustrative experiments, two films on the topics involved and work done by the students were seen.

Mr. H. A. Rand of Lymington brought a large range of samples of materials to illustrate his lecture on Textiles. He began with a description of a wide variety of natural fibres used by mankind throughout the ages. The different types of wool, hair and silk and their uses in woven materials was explained, while the vegetable sources such as linen, cotton, jute and their combinations with the natural fibres was described. A most important factor was the use of dyes for colour effects as were the various processes involved in manufacture. Turning to the artificial silks, nylons and polyesters in general use today, their numerous applications, merits and de-merits were dealt with and the possible future developments. The lecturer concluded with methods of training, citing his own beginnings at the Bournemouth College of Technology and his wide experience in the textile trade since pre-war days. His own family business, which was celebrating its centenary, provided a very interesting personal item.

F. Oldham, Chairman

Zoology—Entomology

The relevant period, October 1973 to September 1974, was average for Insecta during recent years. The dull and rainy weather from late May to early July had an adverse effect. The steady environmental deterioration continues, *e.g.* too frequent ruthless mechanical hedge-shearing or replacement by wire, the cutting or spraying of road verges, the pollution of streams such as the Moors by Hurn Airport, the destruction of wild Orchid rarities and the colonies of *Cupido minimus* at the ancient fosse at 166/898207 and 179/968124 by chalk dumping and over-grazing respectively, both instances of unnecessary farming actions.

LEPIDOPTERA: Due to the warm spring large numbers of hibernated butterflies, *N.io—A. urticae—P.C.-album—G. rhamni,* were on the wing early in March. Unfortunately their spring progeny were decimated by parasites. Butterfly migrants were few. *V. cardui,* one, a male, was seen near Hurn on September 3rd, the sole specimen noted in 1974 by the writer. Although I have occasionally seen *V. atalanta* apparently investigating possible hibernation sites, major evidence favours a return autumn southerly migration of the U.K. summer brood. Our member, Miss M. Brooks, Ph.C., F.R.E.S., records some results of the mild winter: *A. selene* larvae feeding-up mid and *A. phapia* larvae by the end of February. A unique specimen of *Ochlodes venata* halved *gynandromorph* bred. In October 1973, our member, S. C. S. Brown, F.D.S., R.C.S., recorded a species previously unknown in the U.K., *Nepticula erythrogenella,* found abundantly as mining larvae in Rubus at Portland. Several imagines were bred out in May 1974. In November 1974, several mines in oak leaves of *Nepticula Quercifoliae* were found in Bournemouth. The species only just added to the U.K. list.

ORTHOPTERA: The only known locality of the Scaly Cricket, *Mogoplistes squamiger* on Chesil Beach, Weymouth, has been obliterated by the construction of a car park. The large Marsh grasshopper, *Stethophyma grossum,* was found at West Moors. The Woodland grasshopper, *Omocestus rufipes,* was found in a very restricted locality at Holmsley in August.

HYMENOPTERA: The Tawny Mining Bee, *Adtena fulva,* almost absent in Dorset and very local in Hampshire, has a colony in a private garden in Bournemouth, where it has been under constant observation for 38 years. Miss Brooks has recorded and photographed the detailed life cycles of several more U.K. butterflies and hopes to complete her project by Autumn 1975.

ODONATA: The writer, continuing his U.K. Odonata research, records that the numbers of *C. mercuriale—I. pumilio—G. vulgartissimus* in New Forest localities showed a reduction on 1972 census. The numbers of *S. artica* and of *S. Metallica* noted in Perth and Inverness showed an increase on the previous year and emergence was a week later. This Section's field and lecture activities are detailed elsewhere.

J. L. C. Banks, Chairman

Zoology—Mammalia

Field Meetings

Most of the field meetings have been confined to the New Forest and Dorset with emphasis on deer. One of the most successful ones was in the Burley area. A 10-pointer red stag, *Cervus elaphus scoticus,* and his harem of 12 hinds were feeding among gorse scrub. At 5.30 p.m. a royal stag, accompanied by a young stag, moved into the area, no doubt with the intention of ousting the 10-pointer. Failing light prevented accurate observation but roaring was heard. Also seen on that day were two fallow bucks and two fallow does—one a white one.

The annual expedition to the sika deer, *Sika nippon nippon,* when 20 were counted including a large eight-pointer minus the white speculum. That could be due to wallowing. Several grunts, squeaks and squeals were heard in addition to the normal whistles issued three to four times in succession.

Another rewarding meeting was an evening watch when fallow, roe, fox, stoat and badger were studied at close quarters.

By the courtesy of Mr. and Mrs. Cowell an interesting morning was spent in their garden watching, photographing and recording frogs in the ponds. Throop and River Avon provided spoor of water voles, water shrews and otter or mink on the muddy patches by the river.

A visit to a modern dairy farm was arranged by Mr. and Mrs. S. A. Scott, by courtesy of Mr. Tory, who spoke on modern dairy farming methods. His farm consists of 1,100 acres divided into three complexes. Each complex had one dairyman in charge of 150 cows. Each cow had a number and a punched card to correspond to it. The cow was weighed weekly and according to weight it was fed an allowance of cake, barley and added nutriments. Its individual card was placed in the feeding tube as the cow entered its stall on a rotating platform and received automatically the computerised amount stated on the punched card. Before being milked each cow was gently hosed down to stimulate "let-down" or milk flow. The cups were adjusted on the four teats and the electricity was switched on. When the udder was empty the cups automatically dropped off, The milk was piped into a glass container from where it was passed into a huge cistern and finally collected by 500-gallon tankers to bottling stations.

Pond dipping in some of the New Forest's ponds provided two species of newt—palmate and smooth. Larvae of dragonfly, mosquito, water beetles and several species of caddis worms in their individually constructed cases. Mr. F. W. Barnes set up microscopes to facilitate the study of structural details of the specimens.

Marwell Zoological Park, which plays an important role in establishing a breeding nucleus of endangered species, and given the right conditions could be returned to their native lands, gave the party the fascination of seeing three Siberian cubs, born a few days before the visit.

At Bolderwood Deer Sanctuary members saw four colour variations of fallow deer—black, white, common and menil. The last named retains its spotted coat throughout the year. Only bucks were seen and their antlers were in "velvet", a skin that contains blood vessels which provide warmth and food for the developing antler. This skin will be retained until the antler growth is completed, about August/September. It is rubbed off on a fraying

stock such as a sapling, bush or other object. The deer are then said to be in hard horn.

To all who have led or attended field meetings I offer my sincere thanks for their continued support and to my deputy chairman, Mrs. M. Arnold, special appreciation is due.

LECTURES

Mr. Don Small, Deputy Surveyor of the New Forest, spoke of the work of planning for the interests of naturalists, sportsmen and the general public. With so many people visiting the area it was essential to channel them into the places where the least harm to the forest itself could be envisaged. Motorists, who came in thousands, were some of the worst offenders by driving over grassland which was the feeding ground of commonable animals. Thus certain car free zones had been set aside and camp-sites and car parks laid out but well camouflaged from the public eye. Mr. Small explained some of the finer points of sylviculture and the necessity for planting conifers for economic reasons. The ancient and ornamental woods were left untouched wherever possible so that self-regeneration was possible.

The number of deer had to be controlled, not only for the benefit of them but also for that of forestry in general. Small rodents, hares, rabbits and squirrels were also a menace.

Mr. Eric Ashby, the well known naturalist, photographer and broadcaster, showed his own films with commentary on the wildlife of the New Forest. These included stream and pond life, snakes, sand lizards, insects and squirrels. A film of a badger family, including a white one, was outstanding. They are normally nocturnal, but with Mr. Ashby's patience and skill he managed to photograph them in broad daylight. The Society was privileged to have a preview of his Private Life of the Fox film.

Dr. M. J. Delany, of Southampton University Biology Department, spoke on the Ecology of Small Mammals in the United Kingdom and Africa. He focused particular attention to their requirements, both climatic and environmental. When the habitats were destroyed or reduced so the fauna had either to adapt to a new way of life or perish. In Africa prolonged drought and bush fires were other factors with which the small creatures had to contend. Nevertheless, the number of rodents in Africa per acre was more numerous than in a similar habitat in this country. Most of the increase coincided with the rainy season but predation kept mammal population in check.

A History of Cats by Miss N. Woodifield was chiefly concerned with the breeding and management of pedigree cats of which she was an international judge.

Miss Sally Webster, H.N.D., gave a lucid account of the search, in which she was joined by two other young naturalists, in the Dovre region of Norway for the musk oxen. They are natives of Greenland and North America but were introduced into Norway as an experiment as a food crop. Arctic trappers almost annihilated them in the 1800's but today they are fully protected in their wild terrain.

Miss M. M. Brooks, F.R.E.S., illustrated a talk on her safari, which she and her father took in Zululand, Swaziland and Central Natal, by exceptional slides, particularly those of white rhino, greater kudu, lion and a truculent elephant.

Dr. Ian Spellerberg, of Southampton Biology Department, who is doing research on the reptiles of the temperate zone, spoke of the need of a habitat which provided them with the correct temperature, food and space. A temperature of 33°C was required as too low a heat induced ultimate death but one very much higher could also be lethal. The smaller reptiles were fast movers and could catch insects and small mammals, whereas the larger ones were slower and subsisted on vegetation. Snakes are not true hibernators, but go into a cold torpor known as brumination.

The three chairmen of the zoological section collaborated on a project in the New Forest. Sqdn.-Ldr. Banks talked about moths, butterflies and insects, admirably illustrated by his own slides and some micro-slides of Miss Brooks. Mrs. Maddox played a tape of some of the birds heard in the area. The chairman told of her work on the sika deer which she hopes to continue in the future.

The chairman gave a series of lectures on the wild life of Australia following her visit there in 1973. Below is an extract of one of them on Marsupials and Monotremes.

The mammals of Australia are divided into three groups: 1. Monotremes; 2. Marsupials; 3. Placentals.

1. Monotremes (the word means one opening which is used for the bodily functions of elimination of excreta and for reproduction. This group consists of the duckbill platypus, *Ornithorhyncus anatinus* and the echnida, *Tachyglossus aculeatus.*

2. Marsupials (a word meaning pouched) consists of pouched animals varying in size from the large red and grey kangaroos to the tiny pouched mouse. Regardless of size they have a common denominator in that they give birth to young which are in an embryonic state and are only fully developed outside the mother's body, usually in a pouch or pseudo-pouch.

3. Placentals are mammals, *e.g.* domestic ones which are developed to full term within the mother's uterus.

The duckbill platypus has a brownish, soft, short thick furry coat and measures 18 to 20in. The adult has no teeth but hard horny ridges act as grinders. This strange living fossil-like creature is a mixture of bird, reptile and mammal. Bird because of its duck-like bill, webbed feet and an egg layer. Reptile because of the leathery texture of the eggs and the poison spur on the heels of the male. Mammal because of its furry body, warm blood and suckles its young.

The platypus tunnels extensively in river banks and constructs a nest of vegetable matter at the end during September/October in which she lays up to three eggs but usually only one. They are incubated for seven to ten days by being held close to her curled-up body. During this period she does not leave the burrow and seals it off with a thick plug of earth. Because the platypus is so primitive it has no teats but a milky fluid is produced from enlarged pores on the abdomen. The young remain in the nest for three to four months when they are then able to feed on insect larvae, crabs, crayfish and small fish.

The echidna has a body length of 15 to 18in. and is covered with 2 to 3in. spines of variable colours, but each is tipped with white. It has a long tube-like snout or beak which does not open except at the tip above which are the nostrils. Each toe is clawed and on the second toe of the hind feet

there is a longer claw. This acts as a comb to remove debris which accumulates among the quills. The sexes are similar but the male bears a spur on the heels of the hind feet. Unlike the platypus there is no evidence of a poison gland attachment.

Usually only one egg is laid and is deposited into the pouch, a backward opening one, and is only opened up at the breeding season. It is incubated for about seven days. The baby remains in the pouch for approximately seven weeks, that is, until the spines begin to come through the bluish coloured skin. It is then removed from the pouch by the mother which puts it in a place of security and visits it at irregular intervals to nurse. Her milk is very rich and sustaining. By this time the long snout is developed and with its strong claws it can scratch up ants and termites which it collects with its long sticky tongue. There are no teeth but horny serrations on the back part of the tongue work in apposition with hard ridges on the hard palate.

According to research by Dr. Griffiths, a well known zoologist in Australia, it has been revealed that the female has a milk-ejection mechanism comparable to the mammary glands of other mammals. It was formerly thought that the young lapped the milk as it oozed from enlarged pores on the female's abdomen in the area of the pouch.

Marsupials

The kangaroo family is so well known as to make description superfluous but the physiology of them is worthy of mention. Most of the marsupials give birth to immature young which are then carried and nurtured in a pouch or pseudo-pouch until fully developed. The majority of the pouches open upwards but those of the burrowers have backward opening ones to prevent debris entering.

A short time prior to parturition the dam (female kangaroo) cleans out her pouch and later places her tail under her body. This enables the 1in. embryo to drop on to it when it leaves the genital orifice. It scrambles up to the pouch unaided by its mother, and attaches itself to one of the four teats and remains so for some time.

At first it is too weak to suckle but milk is pumped into its mouth by contractions of the mother's abdominal muscles. It is born blind and deaf, only the fore-limbs are at all developed. It is by means of these limbs that it propels itself upwards, guided by, it can be deduced, its sense of smell. The joey (baby kangaroo) remains in the pouch for six to eight months, but during that time it occasionally hops out to nibble grass.

In order to ensure the survival of the species, the dam carries a spare embryo in her uterus and birth can be withheld when drought or other unsuitable conditions prevail.

The koala is about 30in. long and has a thick greyish fur coat, dark eyes, thickly furred raggy ears and a blackish patch over the nose. There is no tail, but at the base of the back where the tail should be there is, in the adult, a calloused internal pad that enables it to sit for hours during daylight in the fork of a tree. The hands have five fingers—three opposible to two and on the hind feet the fingers are opposible to a big toe, arrangements which assist in grasping. It survives on a diet of gum leaves from fewer than a dozen of the thousands of gums available. This diet necessitates a vast amount of bulk to obtain a proper balance of carbohydrates, protein and

fats. In order to accommodate this a specially adapted appendix some feet long is needed. The digestion of the baby is such that it cannot assimilate the roughage and it is this appendix which plays an important role in the weaning of the cub. Again it is the backward-facing pouch that plays its part for it is from there that the cub reaches out to take pre-digested food from its mother's anus.

There is usually one young, which, like all marsupials, is born immature and finds its way into the pouch where it remains for about two months. Once out of the pouch it does not return but rides on its mother's back or clings to her chest.

K. Milner Bennetts, Chairman

Zoology—Ornithology

We have once again held field meetings each fortnight throughout the year. The first Redwings of the winter were observed at Portland Bill on October 11th, but we were unlucky to miss a Woodchat Shrike which had been reported round the Observatory for several days.

Some of our most exciting and interesting field work is done at Keyhaven and Pennington Marshes during the spring and autumn migratory periods. There is a steady passage of passerines and waders particularly during September, and Greenshank, Spotted Redshank, Blacktailed Godwit, Ruff, Grey Plover, Little Stint and Green Sandpiper frequent the mud on the shore and the wet fields on the land side of the sea wall.

At Stanpit Marsh in November a number of Jack Snipe were put up on the marshy land away from the harbour. This small snipe flies up from under one's feet, usually silently and in a direct line, coming down to the ground again very quickly, unlike the Common Snipe, which rises with a hoarse cry, takes a zig-zag course in the air, and then flies clear away.

The winter was mild with spectacular gales in January and February, and posed no great threat to our resident birds. There were several reports of new sitings of the Dartford Warbler by members in this area. We noticed in December that the flock of Brent Geese in Poole Harbour then numbered about 60 birds.

We were fortunate to see Snow Buntings on the sands at Shell Bay in December. These had already been reported, but on such a wide expanse of shore they are easily missed and we watched these attractive winter visitors flying up into the sandhills and down to the tide line. The Snow Bunting, *Plectrophenax nivalis,* breeds in Scandinavia, arctic Europe, Asia and America, and in small numbers on high stony mountain tops in Scotland.

It was planned to take members to the Chew Valley Reservoirs in January to look for wintering wildfowl and grebe, but the petrol situation made this impossible and instead we spent the day at Hengistbury Head, always a worthwhile area to visit.

A particularly interesting day was spent at Half-Moon and Cadnam Common in April. For the first time, after several unsuccessful visits, we found Woodlarks there and heard the beautiful song. This is a bird which breeds early in the year and can be heard singing in March in favoured areas.

Brambling in spring plumage—the first seen this winter—were an added attraction.

Whitethroat, though still in small numbers, were seen and heard in song flight at Winspit and Durlston Head during the summer, and an evening meeting in the Verwood area proved most rewarding, when several Woodcock performed their strange 'roding' directly above us. This display flight takes place at dusk in spring and early summer. It is a slow flapping flight just above the tree tops, in large circles, accompanied by a curious grunting noise.

The most exciting ornithological event of the summer occurred in July, when a Ross's gull, *Rhodostethia rosea,* arrived on Stanpit Marsh and stayed for several weeks. This rare visitor from the arctic is not unlike a small white dove with a thin black ringlet round the neck and in the adult a beautiful pink flush on the breast.

Our annual visit to Brownsea Island in September proved to be very rewarding in the spectacular number and variety of wading birds seen on the lagoon.

In October 1973 this Society helped to organise a programme of films by the Wildfowl Trust of Slimbridge at the Bournemouth Town Hall. Eric Soothill and Peter Whitehead of the Wildfowl Trust film unit showed two of their splendid films and it is intended to hold another similar film show in March 1975.

Mr. Austen Richardson came to speak to us in February on 'British Birds'. Taking a wide view of this subject, he illustrated his lecture with many of his own fine slides; and we were delighted by an account by our President, Miss Milner Bennetts, of the birds seen on her recent trip to Australia, illustrated with slides and gramophone records.

My grateful thanks are again due to those who have helped me during the year by the leading of field meetings, and my deputy, Mrs. V. Follett, in the general planning of our programme.

L. M. Maddox, Chairman

LOCAL RECORD LIST OF BIRDS OF PARTICULAR INTEREST

Scaup duck, *Aythya marila,* **12**, 18th December, Littlesea.

Eider, *Somateria mollissima,* **17**, 18th January, Hengistbury Head, 29th August, Keyhaven.

Brent Goose, *Branta bernicla,* **60**, 6th December, Gravel Point, Poole Harbour, and 18th December.

Montagu's Harrier, *Circus pygargus,* Female, 9th May, Winspit.

Water-Rail, *Rallus aquaticus,* 20th November, Radipole, 18th January, Hengistbury Head.

Jack Snipe, *Lymnocryptes minimus,* **3**, 9th November, Stanpit.

Woodcock, *Scholopax rusticola,* 16th May, Verwood.

Whimbrel, *Numenius phaeopus,* 26th April, Stanpit.

Black-tailed Godwit, *Limosa limosa,* 11th October, Ferry Bridge, 9th November, Stanpit. 18th December, Poole Harbour. **18** on 19th March, Keyhaven, also 29th August. 17th September, Brownsea Island.

Green Sandpiper, *Tringa ochropus,* **5**, 9th August, Kingston Common.

Spotted Redshank, *Tringa erythropus,* **3**, 29th August, Keyhaven, 17th September, Brownsea Island.

Greenshank, *Tringa nebularia,* 18th October, Pennington. 19th March, Keyhaven, **1**, 5th August, Kingston Common. 29th August, Keyhaven. 17th September, Brownsea Island.

Knot, *Calidris canutus,* 18th October, Pennington. **circa 50**, 26th April, Stanpit.

Sanderling, *Crocethia alba*, 6th December, Shell Bay. 17th September, Brownsea Island.
Common Gull, *Larus canus*, 20th November, Radipole.
Little Gull, *Larus minutus*, juv. 11th October, Ferry Bridge.
Woodlark, *Lullula arborea*, **2**, 2nd April, Cadnam Common.
Hooded Crow, *Corvus cornix*, 9th November, Stanpit.
Willow tit, *Parus atricapillus*, 23rd July, Frame Heath.
Bearded Tit, *Panurus biamicus*, 20th November, Radipole, **2**, 19th March, Keyhaven.
Redwing, *Turdus musicus*, small flock, 11th October, Portland Bill, 18th October, Pennington.
Whinchat, *Saxicola rubetra*, 10th September, Ninebarrow Down.
Black Redstart, *Phaenicurus ochrurus*, 20th November, Radipole.
Whitethroat, *Sylvia communis*, **4** singing, 9th May, Winspit. **1**, 24th May, Waterditch. **5 plus** juv. 21st June, Durlston. 9th August, Kingston Common.
Dartford Warbler, *Sylvia undata*, **3**, 18th December, Poole Harbour. 4th July, Hampton Ridge.
Wood Warbler, *Phylloscopus sibilatrix*, 16th May, Verwood.
Spotted Flycatcher, *Muscipcapa striata*, 23rd July, Frame Heath. 10th September, Ninebarrow Down. 17th September, Browsea Island.
Great Grey Shrike, *Lanius excubitor*, 29th January, Beaulieu Road.
Siskin, *Carduelis spinus*, **1**, 2nd April, Cadnam Common.
Brambling, *Fringilla montifringilla*, **2**, 2nd April, Cadnam Common.
Snow Bunting, *Plectrophenax nivalis*, 3, 6th December, Shell Bay.

Members Days

During the past year we have had a greater variety in the subjects of our meetings and it has helped to interest more members.

The quiz on natural sciences, with quizmaster Mr. E. Chambers, was a successful new venture, all members taking part and discussing questions and answers.

Map reading with Squadron Leader J. L. C. Banks was another highlight, though I am afraid some of us did get a little lost at times amongst the contours.

An interesting and entertaining talk on how to identify signs and tracks of animals was given by Mrs. M. Arnold. We wonder if the mouse is still jumping over the invisible stone.

Mr. Follett helped to show us how to make our bird watching more scientifically interesting and advised us to make notes on the behaviour, etc., of the various species over the year and to get together and discuss and analyse the findings.

Finally, I would like to thank all those who have supported Members' Day and given their valuable assistance and time throughout the past year.

J. C. Earl, Chairman

Lantern Slide Collection

The following broad information of the contents of the above may be of interest to members.

The main collection is an accumulation of the old 3¼in. slides—estimated in 1953 to number about 10,000 and considerably more at later dates. These have not been catalogued since about 1955 and later additions have been filed under subject matter and the source from which they came. Although many slides are of historic or scientific interest there are many which could

be dispensed with and a wholesale "weeding" could be advantageous. To examine and assess the value of possibly 15,000 slides is an enormous task.

During the last few years a nucleus of about 1,000 modern colour transparencies has been acquired and is fully catalogued.

There is a large collection of postcards—mainly views and buildings—collected in or before 1955 for use in the episcope.

All the above can be projected in the Society's apparatus and are available on application to the Custodian.

J. C. Mitton

Museum

On June 13th a visit was paid to the Museum by a party of children from Chertsey in Surrey—I do not know how the headmaster knew about our splendid collection. The average age of the children was about 11 years.

They arrived by public transport, led by their Head, P. J. Gooden, B.Sc., Dip. Ed. They were accompanied also by three teachers, one of whom was the wife of their headmaster. The party was welcomed by the Hon. Sec., Mr. H. C. Heales, J.P. and myself.

They were then taken down to our lecture hall and were given a short talk by Mr. Heales. They were then divided up into four separate parties and given identification letters A, B, C and D. These parties were then taken over by Mr. Heales representing geology and fossils, Mr. J. H. O. Mansfield for ornithology, Mr. S. C. S. Brown on entomology and myself archæology. Later I found that our Ancient Egyptian collection, my own special department, seemed to be of great interest.

The children were very intelligent and keen to know all about our exhibits. They spent about 20 minutes with each leader of each section. They were encouraged to ask any relative questions and availed themselves of this side of their visit after each explanative short talk. A teacher accompanied each section of children. After all four groups had been to the different rooms they all assembled again in our main lecture hall.

All four of us then were thanked by the Head, who said how well everything had been arranged and how he, his staff and the children much appreciated our collective efforts.

We ourselves felt that it had all been very worthwhile. We did our level best in the short time allotted to each party to interest the youngsters in their heritage and to give them an insight into what museums were for. I am sure that we achieved our main object.

The arrangements were made mostly by our Hon. Sec. and everything worked like clockwork as is usual with anything that Mr. Heales undertakes.

Our grateful thanks are once more extended to our ciné projectionist, F. W. Barnes, for much work done by him in repairing many items around our premises. I myself always regard him as the Leonardo da Vinci of our Society. Most of our members will have noticed what a marvellous work he has achieved by engraving and fixing the various name plates upon the doors, apart from many other items.

Our very sincere thanks are also due to our Assistant Curator, Miss V. W. Exton, who works so assiduously examining the various drawers of our

exhibits and making sure that no harm can possibly come to them. Every Tuesday and Thursday you may find Miss Exton at work behind the scenes of our museum—over the years she has been a very devoted helper in many ways. So our thanks go out to her once again. I myself feel she does so deserve our grateful appreciation.

I also wish to thank our member, Mr. R. T. Davis, for his fine effort of handiwork in providing our field meetings by coach with a beautifully executed notice board. This will now inform the outside world that B.N.S.S. is on one of its expeditions. It is to be affixed by cohesion to the offside window of the coach on every possible occasion.

Our member, Mr. H. F. Cowell of Christchurch, found a Great Tit's nest in one of his clumps of bamboo. He very carefully extracted this beautiful piece of natural architecture and presented it to the museum. It is now mounted and placed in case No. 5.

Another member, Miss J. B. Wallace, B.Sc., presented us with two fine examples of Chaffinch and Gold Crest nests. They have been mounted and placed in case No. 5. We thank the above two members sincerely.

W. A. Bray, Hon. Curator

Tea Committee Report

Looking back over the year, 1973-74 seems to have had its full share of parties. In addition to the usual Christmas and Garden Party, we had the proud privilege of preparing the Diamond Wedding party for Mr. and Mrs. E. Chambers on April 8th. This was indeed a very happy occasion.

On September 11th, the museum again took on a festive appearance as we celebrated Miss Whitaker's 50th year as a member of the Society.

Before ending my report, I must thank Miss Noll for her kindness in coming to our aid and supplying the material for the new tablecloths.

To all the ladies of the tea committee and Miss Scott, I say a big thank you for all the help and encouragement they have given me throughout the year.

Mollie K. Parkinson, Chairman

Visiting Panel

As the new chairman I find the activities of the Visiting Panel very interesting. The visitees are most grateful for our visits and are able to keep their interest alertly in the Society by them.

Edna Buckland, Chairman

BOURNEMOUTH NATURAL SCIENCE SOCIETY

Statement of the Accounts for the year ended September 30th 1974

Receipts

1972–73 £		£	£
886	Subscriptions	1178	
90	Tax refunds (Covenants)	133	
			1311
	Rents, etc.		
344	Royal Commonwealth Society	425	
150	Camera Club	175	
5	Other Societies	2	
			602
31	Royal Commonwealth Society Gas	27	
10	Telephone call box	10	
3	Projection fees (Net)	4	
			41
75	Field Meetings refunds	63	
20	New Year Party (Net)	15	
34	Garden Party (Net)	38	
—	Concert	14	
—	President's Stall	15	
38	Teas (Net)	44	
			189
637	Interest on Investments	789	
310	Income Tax refunds	255	
			1044
	Total of Ordinary Receipts		£3187

Payments

1972–73 £		£	£
277	Caretaker (wages, Insurance)	275	
187	Insurance (property)	188	
786	Maintenance	1350	
226	Rates	176 (a)	
			1989
258	Gas	484	
171	Electricity	167	
18	Water	20	
			671
194	Printing and Stationery	215	
175	Proceedings	218	
51	Telephone	42 (b)	
65	Postages	82	
			557
175	Garden	318	
25	Meetings Account	31	
14	Subscriptions to other Societies	17	
33	Sundry Payments	58	
			424
	Total of Ordinary Payments		£3641

Receipts other than Ordinary

	£
Donations and Legacy	63
Donations, Buildings Maintenance Fund (Anonymous)	105
National Savings Bank withdrawal	400
Wildfowl Trust Film Show Propn. net proceeds	3
Transfers :	
From Deposit Account	1400
Cine Account	36
Library Account	11
Balance at Bank 30.9.73 Current Account	560
	£5765

Payments other than Ordinary

		£
Purchase Luton Corporation 13¼% Bonds		
Investment Account	400	
Buildings Maintenance Fund	105	
		505
Donation Wild Life Fund		5
Transfers :		
To Deposit Account		1387
Cine Account		34
Library Account		10
Balance at Bank 30.9.74 Current Account		183
		£5765

Notes : (a) There is a balance of £211 owing on this account.
(b) One quarter outstanding.

AUDITOR'S REPORT :

We have examined the above Statement of Accounts with the books of the Society and vouchers for payments, and certify the same to be correct.

J. G. PARKINSON
H. P. WHEELER } *Honorary Auditors*

F. W. Wilson, F.C.I.S., *Hon. Treasurer*
12th October, 1974.

DEPOSIT ACCOUNT

	£		£
Balance 30.9.73	304·57	To Current Account	1400·00
From Current Account	1386·97	Balance 30.9.74	291·54
	£1691·54		£1691·54

CINE ACCOUNT

	£		£
Subscriptions to General Account	36·39	Hire of Films and return postage	29·64
		Postages and Sundry expenses From General Account	4·00
		From General Account	33·64
		Surplus — to General Account	2·75
	£36·39		£36·39

LIBRARY ACCOUNT

	£		£
Balance in hand 30.9.73	8·60	Transfer to General Account	10·94
Sale of surplus books	2·34	Library Expenses	4·47
Sundries	·17	Library Maintenance	4·76
Transfer from General Account	10·00	Balance in hand 30.9.74	·94
	£21·11		£21·11

FIELD MEETINGS ACCOUNT

	£		£
Cash in hand 30.9.73	13·45	Meetings Expenses	29·43
Surplus from Meetings	112·29	Meetings, General Account	10·00
Transfer from General Account	10·00	Transfer to General Account	72·59
		Balance in hand 30.9.74	23·72
	£135·74		£135·74

GARDEN ACCOUNT

	£		£
Per Treasurer	318·40	Gardener	316·00
		Gardener Gratuity	1·00
		Weedkiller	1·40
	£318·40		£318·40

BUILDINGS MAINTENANCE FUND

	£
Donations (Anonymous)	105·00

INVESTMENTS

	Cost	Value 30.9.74
	£	£
Narrow Range		
£1000 British Transport 3% Stock 1978–88	775	410
£1500 Consolidated Stock 4%	979	400
£1200 British Electricity 4¼% Stock 1974–79	984	948
£ 500 Treasury Bonds 9% 1994	512	328
£ 500 Luton Corporation Mortgage 7¼% 1975	500	500
£1620 Treasury Loan Stock 9½% 1999	1598	1070
	£5348	£3656
Wide Range		
£ 750 Treasury Bonds 9% 1994	788	493
£ 800 Treasury Bonds 9% 1992–96	772	2976
£4000 Treasury Bonds 9% 1992–96	4219	
	£5779	£3469
National Savings Bank — Investment Account	50	50
Ordinary Account	50	50
50 "A" Shares Great Universal Stores (Donation) Estimated value ..	145	48
£505 Luton Corporation 13¼% Bond 1976 — Investment Account ..	400	505
Buildings Maintenance Fund Account	105	

Lectures, Field Meetings and Visits, 1973-74

Lectures open to the public free of charge are shown by the letter P *after the date. Degrees and other qualifications are inserted only after the first mention of names.*

The programme comprised 80 Lectures, 72 Excursions and Field Meetings, 11 Members' Days and 7 Cine Subscription Programmes making a total of 170. The Annual General Meeting, 12 monthly Council Meetings and regular meetings of Committees were held as usual.

GENERAL

		LECTURE	LECTURER
1973			
Oct.	31	Birds of a Cheshire Woodland and Island Birds	E. Soothill and P. Whitehead
1974			
Mar.	30	Voices of Music	H. C. Heales
Apr.	6	Old Farming Methods	P. Bunby, B.SC.
Apr.	17	Torquay. Briefing of 5-day Field Meeting	Mr. and Mrs. Thomas and Miss McAlpine
July	8	Unusual Aspects of Beauty	Miss Mary Exton
July	10	Birds, Beasts and Flowers	Dr. T. M. Bell
July	21	The Four Seasons	D. R. Trenbath
Aug.	7	West Dorset Study	Miss K. M. Pawson
Apr.	22/26	5-Day Visit to Torquay	Mr. and Mrs. Thomas
June	6	A Visit to Bicton Gardens	Mr. and Mrs. Thomas
Aug.	4	The Tall Ships Race	Mr. and Mrs. Thomas
Aug.	20	A Visit to the Open Air Museum, Singleton, Sussex	Mr. and Mrs. Thomas
Aug.	28	European Pot-Pourri	H. D. Griffiths

SECTIONS

Astronomy — Chairman : G. Nash

1973			
Oct.	17		
1974			
Mar.	23	Gravity	G. Nash

Archæology and History — Chairman : J. Robinson

1973			
Nov.	21	Afghanistan—Slides (Should have been Minoan Crete by Mrs. Simpson)	Mrs. E. C. Earl
Dec.	8	Russian Icons	E. B. A. Edwards, B.A. (CANTAB).
1974			
Jan.	16	Australian Aborigines	Miss K. M. Bennetts, F.Z.S.
Feb.	20	Cologne Mosaic Preservation	John Robinson, B.SC., I.S.O.
Mar.	20	King John	Mrs. E. C. Earl
May	22	The Valley of the Nile	W. H. Lee
June	17	History and Development of Bournemouth	E. A. Oscroft
July	15	Buried Treasure. Mildenhall, Sutton Hoo Viking Ship Burial	John Robinson
Aug.	19	New Forest Pottery	Mrs. S. W. Ouzman
Aug.	20	A Visit to the Open Air Museum Singleton	Mr. and Mrs. Thomas
Sep.	23	Some Notable Gardens	John Robinson
Oct.	23	Buried Treasure, Mildenhall (Part II)	John Robinson
May	31	Abbotsbury Gardens and Chesil Beach	John Robinson
Aug.	20	Singleton Open Air Museum	Mr. and Mrs. Thomas

Botany **Chairman : Miss K. M. Rushton**

1973			
Nov.	17P	Orchids of Europe	Sqdn. Ldr. J. L. C. Banks
1974			
Jan.	26	The Call of the Running Tide	Desmond and Marjorie Parish
Feb.	16	A Forester's Year	Alex Grossert
Mar.	16	Our Heritage of Flowers and Countryside	F. W. Cooke
July	24	Orchids of the United Kingdom	Sqdn. Ldr. J. L. C. Banks
Sept.	9	Spring in Portugal	W. A. Strain, M.A.
Oct.	14	Some Flora and Fauna of Australia	Miss K. M. Bennetts, F.Z.S.

Apr.	16	Pamphill, Wimborne	Miss E. M. Whitaker
May	17	Spyways Barn, Purbeck	Mrs. V. Follett and Mrs. A. K. Hunt
June	4	Queen's Bower and New Park Enclosure	Miss E. M. Whitaker
June	6	Visit to Bicton Gardens, Devon	W. C. Thomas and Mrs. G. M. Thomas
June	18	New Forest	Mrs. M. P. Yule and Miss E. S. Haines
June	25	Stanpit Marsh	Miss E. M. Whitaker
July	3	Kew Gardens	Mrs. A. K. Hunt
July	12	Beaulieu Road	Mrs. A. K. Hunt
Aug.	15	New Forest	Mrs. M. Kent and Miss M. Blower
Sept.	19	Avon Meadows, Christchurch	Mrs. O. Murch and Mrs. K. D. Killick
Oct.	22	Fungus Foray	Mrs. A. K. Hunt

Geography and Geology **Chairman : H. C. Heales**

1973			
Oct.	10	Films of the Society's 1973 Excursions	John Robinson
Nov.	3	The Realm of the Incas, Peru and the Andes	Capt. H. J. Rose, F.R.G.S.
Dec.	1	By Tre, Pol and Pen: A Cornish Study	H. C. Heales
1974			
Jan.	19	Meandering in Moscow and Maracanda	Dr. W. H. Tattersall, M.A., M.D.
Jan.	21	Long White Cloud—New Zealand (*repeat*)	K. L. Anderson
Feb.	18P	The Saga of Lapland, Return to Finland	Mrs. Paavo Berglund
Mar.	18	The Stour Basin	Miss F. M. Exton, B.A.
Apr.	20	Continent of Contrasts, Australia	Miss K. M. Bennetts
May	15	The Mysterious East, China—Ancient and Modern	Dr. Doris Odlum
June	19	The Record of the Rocks	Dr. G. W. A. Sparrow, M.SC., B.SC., F.R.C.S.
June	26	By Tre, Pol and Pen: A Cornish Study (*repeat*)	H. C. Heales
July	17	Another Tale of Two Cities, Boston and Washington	W. H. Lee
Aug.	21	One Country—Two Continents, Turkey Ancient and Modern	H. C. Heales
Sept.	25	Alice Springs: Central Australia	K. L. Anderson

Apr.	30	The Upper Stour and Stourhead	Miss F. M. Exton

Photography **Chairman : Miss V. M. Ogle**

1973			
Oct.	6	Kaleidoscope (Members' Slides)	Miss V. M. Ogle
Nov.	24	Spring in the Highlands (Part I)	Miss V. M. Ogle
Dec.	17	Spring in the Highlands (Part II)	Miss V. M. Ogle
1974			
Jan.	5	The Seychelles	Terry Woodford
Feb.	2	A Trip to the High Pyrenees	H. T. Coats
Mar.	2	Journey to the Holy Land and Petra	D. Tarrant

Physics and Chemistry **Chairman : F. Oldham**

1973			
Oct.	15	History of the British Transport Docks Board	L. G. Smith
Nov.	14	Modern Lighting Practice	A. G. Brown
Dec.	12	Corrosion	B. R. Leverett, B.SC.
1974			
Jan.	9	Health Care, Past, Present and Future	G. Davies
Feb.	13	Drugs and Man (Part II)	Dr. R. J. Walker
Mar.	13	Integrated Circuits in Micro-Electronics	E. W. Jefferson, B.SC.
Apr.	10	Textiles	Herbert A. Rand

June	27	Visits to the Electronics Dept., Bournemouth	
July	9	College of Technology	

Zoology — Entomology **Chairman : Sqdn. Ldr. J. L. C. Banks**

1973			
Oct.	24	Insecta Techniques Without Hands	Sqdn. Ldr. J. L. C. Banks
Nov.	16	A New Look at the Metamorphoses of the U.K. Butterflies (Part II)	Miss M. Brooks, PH.C., F.R.E.S.
1974			
Jan.	23	Insecta Techniques (Part II)	Sqdn. Ldr. J. L. C. Banks
Feb.	23	Some Interesting Insecta	S. C. S. Brown, F.D.S., R.C.S., L.D.S.
Mar.	27	South African Butterflies and Other Insecta	Miss M. Brooks
Mar.	29	Field Day—Observation of Insecta in New Forest area	Sqdn. Ldr. J. L. C. Banks
May	1	The Orders of World Insecta (Part I)	Sqdn. Ldr. J. L. C. Banks
May	7	Field Party—Observation of Insecta, Burley area	Sqdn. Ldr. J. L. C. Banks
July	18	Field Party—Observation of rare Lepidoptera, Salisbury area	Sqdn. Ldr. J. L. C. Banks
Sept.	3	Field Part—Observation of Insecta, Verwood area	Sqdn. Ldr. J. L. C. Banks
Sept.	18	Metamorphoses of U.K. Butterflies (Part III)	Miss M. Brooks

Zoology — Mammalia **Chairman : Miss K. M. Bennetts**

1973			
Oct.	22	New Forest	Donn Small, M.SC.
Nov.	28	Badgers, Foxes and Deer	Eric Ashby
Dec.	19	Some Wild Life of Australia	Miss K. M. Bennetts
1974			
Jan.	12	The Ecology of Small Mammals in United Kingdom and Africa	M. J. Delany, D.SC.
Jan.	30	A History of Cats	Miss N. Woodifield
Mar.	9	Marsupials and Monotremes	Miss K. M. Bennetts
Apr.	27	In Search of Musk Oxen in Norway	Miss Sally Webster
May	8	Safari in Southern Africa	Miss M. M. Brookes, F.R.E.S.

May	22	The Ecological Requirements of Temperate-Zone Reptiles	Dr. Ian Spellerberg
Aug.	14	This and That, Here and There at Home and Abroad	Miss K. M. Bennetts
Sept.	4	A Project on Wild Life in the New Forest	Chairmen of Entomology Mammalia and Ornithology Microscopy : F. W. Barnes
Sept.	16	Extracts from Previous Talks on Australia	Miss K. M. Bennetts

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1973			
Oct.	9	Red Deer	Mrs. M. Arnold and Miss K. M. Bennetts
Oct.	23	Sika Deer	Mrs. M. Arnold and Miss K. M. Bennetts
Nov.	2	Deer	Miss K. M. Bennetts
Nov.	15	New Forest	J. G. Parkinson
Nov.	29	New Forest	Mrs. M. Arnold
Dec.	11	New Forest	Mr. and Mrs. G. Lanigan
1974			
Jan.	25	New Forest for Mammals	H. M. Kent
Feb.	14	Frogs and Mammals	Mrs. M. Arnold and Miss K. M. Bennetts
Feb.	26	Holidays Hill for Deer	J. G. Parkinson
Mar.	12	Hengistbury Head Area	Ranger and Miss K. M. Bennetts
Apr.	9	Throop	Mrs. L. V. Nicklen
Apr.	19	Newton Heath for Sika Deer	W. J. Heaton
May	3	Pond Dipping	F. W. Barnes
May	14	Coach to Marwell Zoological Park	Miss K. M. Bennetts
May	29	New Forest for Deer	Miss K. M. Bennetts
June	13	Anderwood Inclosure	Mr. and Mrs. H. B. Lunn
June	28	New Forest for Mammalian Watch	Miss K. M. Bennetts
July	16	Coach to Bolderwood Deer Sanctury	Miss K. M. Bennetts
July	26	New Forest (Lyndhurst Area)	Mrs. and Miss Warrick-Haller
Aug.	1	New Forest for Roe Deer	Miss K. M. Bennetts
Aug.	23	New Forest	Mrs. M. Arnold and Miss K. M. Bennetts
Sept.	13	Studland Heath Nature Reserve	The Deputy Warden
Sept.	27	Frame Heath for Sika Deer	Mrs. M. Arnold and Miss K. M. Bennetts

Zoology — Ornithology **Chairman : Mrs. L. M. Maddox**

1973			
Oct.	31	Films—'Birds of a Cheshire Woodland' and 'An Island of Birds'	The Wildfowl Trust Film Unit
1974			
Feb.	9	Some Australian Birds	Miss K. M. Bennetts
Feb.	27	British Birds	Austen Richardson, M.A.

1973			
Oct.	11	Portland Bill	Mrs. L. M. Maddox
Oct.	18	Pennington Marshes	Mrs. L. M. Maddox
Nov.	9	Stanpit Marshes	J. H. O. Mansfield
Nov.	20	Radipole Lake and Weymouth Area	Mrs. V. Follett
Dec.	6	Shell Bay and Studland Beach	Mrs. L. M. Maddox
Dec.	18	Brands Bay	Mrs. L. M. Maddox

1974			
Jan.	3	Stanpit Marsh	J. H. O. Mansfield
Jan.	18	Hengistbury Head	Mrs. L. M. Maddox
Jan.	29	New Forest—Beaulieu Road	Mrs. L. M. Maddox
Feb.	8	Crichel Woods	Mrs. V. Follett
Feb.	21	Cannon Hill	Mrs. D. Rossiter
Mar.	5	Badbury Rings	Mrs. D. Rossiter
Mar.	19	Keyhaven Marshes	Mrs. L. M. Maddox
Apr.	2	Half Moon and Cadnam Common	Miss K. Rushton
Apr.	26	Stanpit Marsh	J. H. O. Mansfield
May	9	Winspit	Mrs. L. M. Maddox
May	16	Evening Meeting to Verwood	Mrs. L. M. Maddox
May	24	Waterditch	Mrs. L. M. Maddox
June	7	Hale Purlieu	H. M. Kent
June	21	Durlston Head	Mrs. L. M. Maddox
July	4	Hampton Ridge	Mrs. L. M. Maddox
July	23	Frame Heath	Mrs. L. M. Maddox
Aug.	9	Kingston Common	Mrs. L. M. Maddox
Aug.	29	Keyhaven Marshes	Mrs. L. M. Maddox
Sept.	10	Ninebarrow Down	Mrs. L. M. Maddox
Sept.	17	Brownsea Island	A. J. Wise (Warden) and Mrs. L. M. Maddox

MEMBERS' DAYS

Chairman : Mrs. J. C. Earl

1973			
Oct.	8	General Quiz on the Natural Sciences	E. Chambers
Nov.	19	Members to Show 10 Favourite Colour Slides	
Dec.	10	Diorama Mammalia	Miss K. M. Bennetts
1974			
Jan.	14	Welcome to New Members	Brig. B. D. Edwards
Feb.	11	Map Reading (1)	Sqdn. Ldr. J. L. C. Banks
Mar.	11	Map Reading (2)	Sqdn. Ldr. J. L. C. Banks
Apr.	8	Tracks and Signs of some British Animals	Mrs. M. Arnold
May		No Meeting	
June	12	Round the B.N.S.S. Garden	Mrs. Hunt
July	22	Some Aspects of Bird Watching	J. C. Follett
Aug.	12	New Members' Day	Brig. A. B. D. Edwards
Sept.	11	Cine Programme of West Africa	R. C. Buckland

Bournemouth Natural Science Society

List of Presidents (1903-1975)

1903—04	J. E. Beale (Mayor of Bournemouth)
1904—06	G. E. J. Crallan, M.A., M.B., M.R.C.S.
1906—07	H. J. Waddington, F.L.S.
1907—09	A. Ransome, M.A., M.D., F.R.C.P., F.R.S.
1909—10	A. Smith Woodward, D.Sc., F.R.S., F.L.S., F.G.S.
1910—11	Dukinfield H. Scott, M.A., LL.D., F.R.S., F.L.S., F.G.S.
1911—13	Sir E. Ray Lankester, K.C.B., M.A., LL.D., F.R.S., F.L.S.
1913—16	Sir Daniel Morris, K.C.M.G., J.P., M.A., D.Sc., D.C.L., F.L.S.
1916—17	The Rt. Hon. the Earl of Malmesbury, D.L., J.P.
1917—18	Sir Jethro J. H. Teale, M.A., D.Sc., LL.D., F.R.S.
1918—20	Field Marshal Lord Grenfell of Kilvey, G.C.B., G.C.M.G., LL.D., F.S.A.
1920—21	Lt. Col. Sir David Prain, C.M.G., C.I.E., F.R.S.
1921—23	F. G. Penrose, M.D., F.R.C.P., F.Z.S., M.B.O.U.
1923—24	Sir F. W. Keeble, K.B.E., D.Sc., F.R.S.
1924—26	Hubert Painter, B.Sc., F.C.S.
1926—28	Heywood Sumner, F.S.A.
1928—29	Claude Lyon
1929—30	Professor F. O. Bower, D.Sc., F.R.S.
1930—31	Henry Bury, M.A., F.L.S., F.G.S.
1931—32	Dukinfield H. Scott, M.A., LL.D., F.R.S., F.L.S., F.G.S.
1932—33	J. P. Williams-Freeman, M.D.
1933—34	Rev. F. C. R. Jourdain, M.A., F.Z.S., M.B.O.U.
1934—35	Sir F. W. Dyson, K.B.E., M.A., D.Sc., LL.D., F.R.S., F.R.A.S.
1935—36	Henry Bury, M.A., F.L.S., F.G.S.
1936—37	Sir Harold Carpenter, M.A., D.Sc., F.R.S.
1937—38	Professor John Cameron, M.D., D.Sc., F.R.S.E.
1938—39	Professor G. D. Hale Carpenter, M.B.E., D.M., F.L.S., F.Z.S., F.R.E.S.
1939—40	W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P., F.R.S.E.
1940—41	Rev. Professor M. C. Potter, M.A., D.Sc., F.L.S.
1941—42	Inst.-Capt. M. A. Ainslie, R.N., M.A., F.R.A.S.
1942—43	William C. Simmons, B.Sc., A.R.C.S., F.G.S.
1943—44	Professor S. Mangham, M.A.
1944—45	A. S. Hemmy, B.A., M.Sc.
1945—46	J. F. N. Green, B.A., F.G.S.
1946—47	Lt.-Col. C. D. Drew, D.S.O., F.S.A.
1947—48	W. J. Woodhouse, A.C.P.
1948—49	Edward Hindle, M.A., D.Sc., F.R.S., F.Z.S.
1949—50	Mrs. W. Boyd Watt, F.Z.S., M.B.O.U.
1950—51	Professor Sir R. A. Peters, M.C., M.A., M.D., F.R.S.
1951—52	Ernest Chambers, F.L.S.
1952—53	F. Williamson, F.R.HIST.S.
1953—54	H. E. Clarke, M.A., B.Sc., F.R.I.C.
1954—55	W. J. Read, M.Sc., F.R.I.C.
1955—56	W. S. Brown, B.Sc.
1956—57	A. W. Legat, M.INST.C.E., M.I.S.E.
1957—58	D. A. Wray, PH.D., M.Sc., F.G.S.
1958—59	Miss M. A. M. Penrose, B.Sc.
1959—60	Miss D. M. Lowther, B.Sc.
1960—61	James Fisher, M.A., F.L.S., F.Z.S.
1961—62	W. P. Winter, B.Sc.
1962—63	F. H. Perring, PH.D., M.A.
1963—64	Miss F. M. Exton, B.A.
1964—65	Dame Kathleen Lonsdale, D.B.E., D.Sc., F.R.S.
1965—66	A. J. Butcher, F.R.I.B.A.
1966—67	Mrs. A. K. Hunt, B.Sc.
1967—68	Professor F. Hodson, PH.D., B.Sc., F.G.S.
1968—69	T. Marshall Bell, B.A., M.B., B.CH.
1969—70	Ernest Chambers, F.L.S.
1970—71	Graham Teasdill, F.M.A., F.R.S.A., F.R.N.S., F.Z.S.
1971—72	Miss Ursula M. Ogle
1972—73	Sqd.-Ldr. J. L. C. Banks
1973—74	Miss K. Milner Bennetts, F.Z.S.
1974—75	Donn Small, M.Sc.

PUBLICATIONS RECEIVED

The following publications were received in the Library during the year. Some of them were gifts from members who subscribe personally to the particular Society. The Library Committee are glad to record their appreciation of such gifts.

1. Publications issued by a Society or Institution

Birmingham Natural History & Philosophical Society—*Proceedings.*
Botanical Society of the British Isles—(1) *Watsonia,* (2) *Proceedings.*
Bristol Naturalists' Society—*Proceedings.*
British Association for the Advancement of Science—*Science.*
British Deer Society—*Deer News.*
British Trust for Ornithology—(1) *New Bulletin,* (2) *Bird Study.*
California Academy of Sciences—*Proceedings.*
Cambridge Antiquarian Society—*Proceedings.*
Carnegie U.K. Trust—*Annual Report.*
Dorset Natural History & Archaeology Society—*Proceedings.*
Fair Isle Bird Observatory—*Annual Report.*
Fauna Preservation Society—*Oryx.*
Hampshire Field Club & Archaeology Society—*Proceedings.*
Hampshire Field Club: Ornithological Section—*Bird Report.*
Hertfordshire Natural History Society—*Transactions.*
Historical Association—*Pamphlets.*
Isle of Wight Natural History & Archaeological Society—*Proceedings.*
Linnean Society of London (Botany)—*Proceedings.*
Men of the Trees—*Trees and Life.*
National Trust—*News Letter.*
Royal Commonwealth Society—*Journal.*
Royal Horticultural Society—*Journal.*
Royal Society for the Protection of Birds—*Bird Notes.*
Senckenbergischen Naturforschenden—*Natur und Museum.*
Severn Wildfowl Trust—*Annual Report.*
Smithsonian Institution, U.S.A.—*Annual Report.*
Societé Jersiaise—*Annual Bulletin.*
The British Entomological & Natural History Society—*Proceedings and Transactions.*
Torquay Natural History Society—*Transactions and Proceedings.*
Tromso Museum, Norway—(1) *Astarte (short papers),* (2) *Acta Borealia.*
Upsala University, Sweden—*Acta Phytogeographica Suecica.*
U.S. Information Service—*Pamphlets, Science Horizons.*
West Wales Naturalists' Trust—*Nature in Wales.*
Zoological Society of London—*Newsletter.*

2. Periodicals received

Animals, Antiquity, British Birds, Geographical Magazine, Nature, Science Journal

The Bourne Press, 3/11 Spring Road, Bournemouth